COTTON

Serving the
TEXTILE INDUSTRIES

like water wears stone

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DIVISION

The steady flow of economies that spring from the use of Condor Products wears away production costs that threaten to dam your streams of profit.

During the past 39 years numerous improvements have been made on every product in the Condor Line. Their use in the textile industry has increased continuously.

More than 400 textile mills now use Condor Belt, Hose, Rolls and Condor Mill Sundries.

Condor Products have repeatedly lowered maintenance costs for their user.

CONDOR PUTS COTTON TO WORK FOR YOU!

Sold by leading jobbers

The Manhattan Rubber Mfg. Division
OF RAYBESTOS-MANHATTAN, INC.

Executive Offices and Factories
Passaic, New Jersey

Condor LINE

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Veeder-ROOT

now comes

DIRECT

to the

Southern

Mills-

-The NEW Veeder-ROOT GREEN COUNTER with convenient Front Key location

with its own

GREENVILLE OFFICES — for closer contact and service

See our Exhibit at the Southern Textile Exposition-Booth 108 October 17-22

Veeder-ROOT

INCORPORATED

HARTFORD, CONN., GREENVILLE, S.C.

COTTON is published monthly by W. R. C. Smith Publishing Co., Dalton and Atlanta, Ga. Subscription rates, United States and Possessions, $1.00 for one year; $2.00 for three years; Canada, $1.50 per year; Foreign countries, $2.00 per year. Entered second-class matter at the postoffice, Dalton, Ga., under the Act of March 3, 1879

Working in Beam Alley
Made Easy
by Sliding Bar Warp Stop Motions

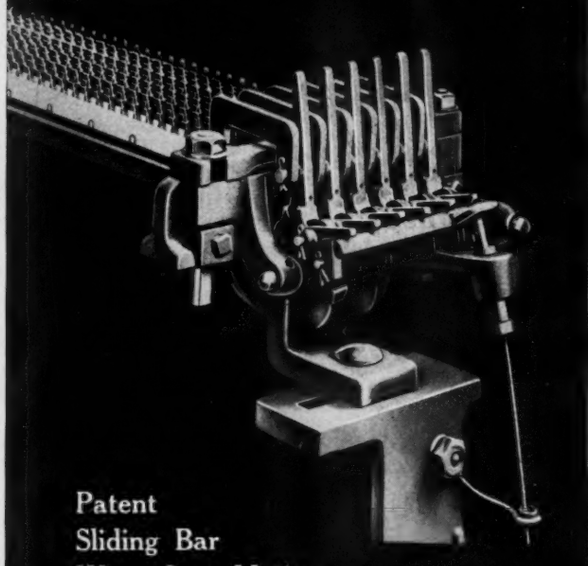
Only Half the Time to Tie in an End

Because Loom Stops

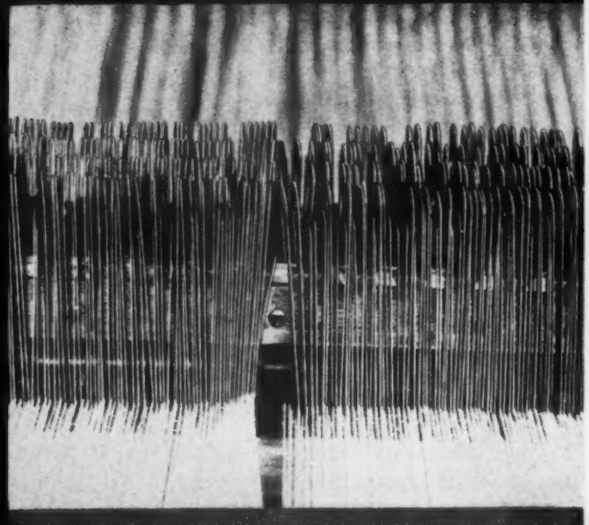
With Shuttle in Left Hand Box
With the Harnesses Level
With Crank on Bottom Center
With Indicator Showing Bank
Where Wire is Down
With Warp Opened at Broken End

Leaving the Weaver Nothing to Do But

Pick up the Broken End
Tie it in
Pull on the Shipper Handle



Patent
Sliding Bar
Warp Stop Motion



Warp Automatically Opened
at Broken End

DRAPER CORPORATION

Hopedale Massachusetts

Southern Offices Atlanta Ga and Spartanburg S C

HIGH OF NOON

EXPERIENCE and SKILL

in the MANUFACTURE of

MECHANICAL CLOTHS

Is Typified in the Product of

THE JOSEPH NOONE'S SONS COMPANY

A. ERLAND GOYETTE,

The Oldest Manufacturers in this Country of

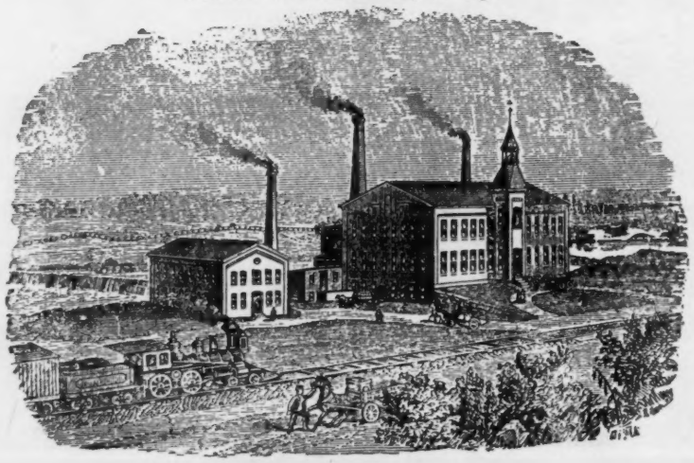
Roller, Clearer and Washer Cloths, and Slasher and Sizing Flannels for Cotton Mills, Printers' Blankets, Piano Cloths and Laundry Blankets

Every Description of Woolen and Linen Cloths for Machinery

Ask and Insist that Noone's Cloth Be Used

WILLIAM R. NOONE & CO., Selling Agents, BOSTON

ARNOLD T. MALONE, Manager



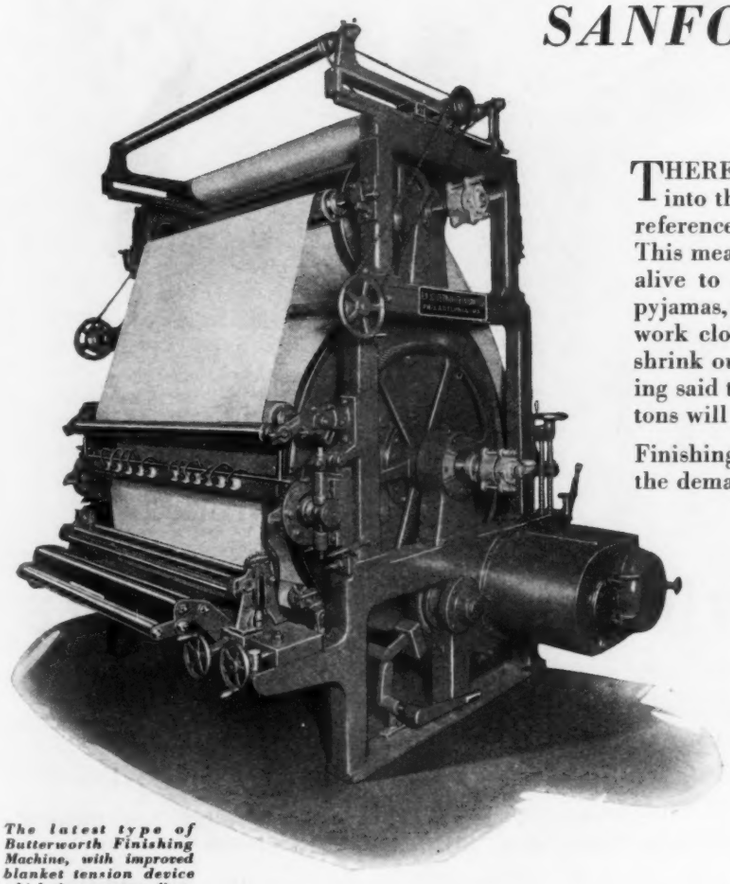
MILLS
PETERBOROUGH,
N. H.

OFFICE
105 WASHINGTON ST.
BOSTON, MASS.

ESTABLISHED 1831

THE DEMAND IS HERE FOR FABRICS THAT WILL NOT SHRINK . . .

SANFORIZED FABRICS



The latest type of Butterworth Finishing Machine, with improved blanket tension device which gives greater adjustment to blanket and insures the blanket giving a maximum of service. This machine plays an important part in good Sanforizing.

THERE is hardly an issue of any publication going into the Textile field that does not contain some reference to shrinking — it's the talk of the Trade. This means, of course, that the Textile Industry is alive to the necessity for giving buyers of shirts, pyjamas, underwear, women's and children's dresses, work clothes, and so forth, fabrics which will not shrink out of size. One authority is quoted as having said that from now on "everything but the buttons will have to be shrunk".

Finishing plants which have seen the trend toward the demand for goods that will not shrink include such concerns as Delta Finishing Works, Philadelphia, Pepperell Manufacturing Company, Lindale, Ga., the Ramapo Finishing Company, Sloatsburg, N. Y., Union Bleachery, Greenville, S. C., and Ware Shoals Bleachery, Ware Shoals, N. C.—All of these have installed Butterworth Sanforizers—the Union Bleachery having installed three to keep up with the demand for Sanforized Fabrics and the Pepperell Mfg. Co., two.

Some day, and soon, all fabrics must be guaranteed *not to shrink*, and plants that install Butterworth Sanforizers before that time will most certainly benefit by their foresight.

It is because of this that we cannot urge you too strongly to investigate the possibility of Sanforizing *your* fabrics *now*, for complete Sanforizing ranges cannot be built in a day and you certainly should be in a position to take advantage of the demand that is already here for fabrics that will not shrink — these are fabrics shrunk on Butterworth Sanforizers.

Our organization has been licensed by Cluett, Peabody & Co., Inc., to build Sanforizing ranges. These are made complete under one roof, there is no divided responsibility.

Complete literature will be sent promptly and Butterworth Engineers will be glad to discuss with you Sanforizing in connection with your products.

H. W. BUTTERWORTH & SONS COMPANY, ***Established 1820***

PHILADELPHIA, PA.

PLANTS *at* PHILADELPHIA *and* BETHAYRES, PA.

New England Office:
TURKS HEAD BUILDING
Providence, R. I.

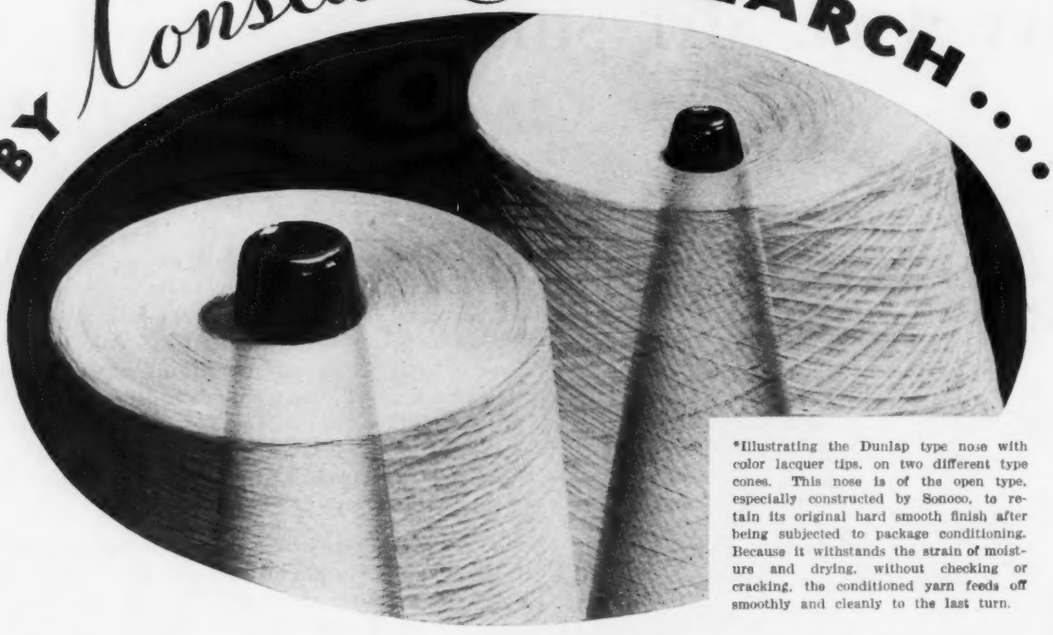
Southern Office:
JOHNSTON BUILDING
Charlotte, N. C.

In Canada:
W. J. WESTAWAY CO.
Hamilton, Ontario

BUTTERWORTH *Finishing* MACHINERY

A COMPLETE LINE OF FINISHING AND RAYON MACHINERY FOR THE TEXTILE INDUSTRY

BY *Constant* RESEARCH ....



*Illustrating the Dunlap type nose with color lacquer tips, on two different type cones. This nose is of the open type, especially constructed by Sonoco, to retain its original hard smooth finish after being subjected to package conditioning. Because it withstands the strain of moisture and drying, without checking or cracking, the conditioned yarn feeds off smoothly and cleanly to the last turn.

DO WE CONTINUOUSLY IMPROVE

Our policy of continual research and repeated experiments is responsible for Sonoco having developed most of the major improvements made in their field in the last thirty years.

The Dunlap Nose is an outstanding example of an exclusive Sonoco development, successfully overcoming certain difficulties previously encountered upon conditioning yarn in the wound package.

The textile industry has been benefited by many Sonoco refinements such as these, effecting certain of their manufacturing processes, and yet Sonoco has consistently adhered to their plan of manufacturing and maintaining the lowest possible cost so successfully, that Sonoco Products are standard for both price and quality in all the markets of the world.

SONOCO PRODUCTS COMPANY

HARTSVILLE, SOUTH CAROLINA

Mills: Hartsville, S. C.; Rockingham, N. C., and 709 W. Front St., Plainfield, N. J.

New England Sales Representative
P. O. Box No. 170, New Bedford, Mass.

Eastern Sales Office at 709 West Front Street, Plainfield, N. J.

SONOCO

CONES ● TUBES ● UNDER CLEARER ROLLS ● SPOOLS

WHO WILL PROFIT

BUSINESS IS PICKING UP . . cotton prices are better . . as this is being written more spindles are going into operation . . more looms starting up . . hands are being called back to work. The world isn't altogether on the toboggan after all.

Who will profit? The mills which have been "waiting for the turn to come"? Not likely . . not at first anyhow.

The ones who will profit first and most are those who have put themselves physically in a position to meet and handle today's conditions.

We know there are many such mills. How otherwise account for the fact that installations of Casablancas Long Draft Spinning have increased materially every year since 1927, and more in 1930 and 1931 than in any other years?

Casablancas Spinning means lower production costs, a better product, greater profit. It's no gamble. Its many advantages have been proven by the experience of every mill which has made an installation. Ask for a Whitin engineer to survey your spinning room, and show you exactly what Casablancas Spinning can do for you.

Visit the Whitin Booth at the Southern Textile Exposition and see a Casablancas Frame at close range

WHITIN MACHINE WORKS

ESTABLISHED 1831

Fales & Jenks Division
Woonsocket Machine and Press Division

Whitinsville, Massachusetts, U. S. A.

Charlotte, N. C. Atlanta, Ga.

WHITIN MACHINE WORKS
Whitinsville, Mass.

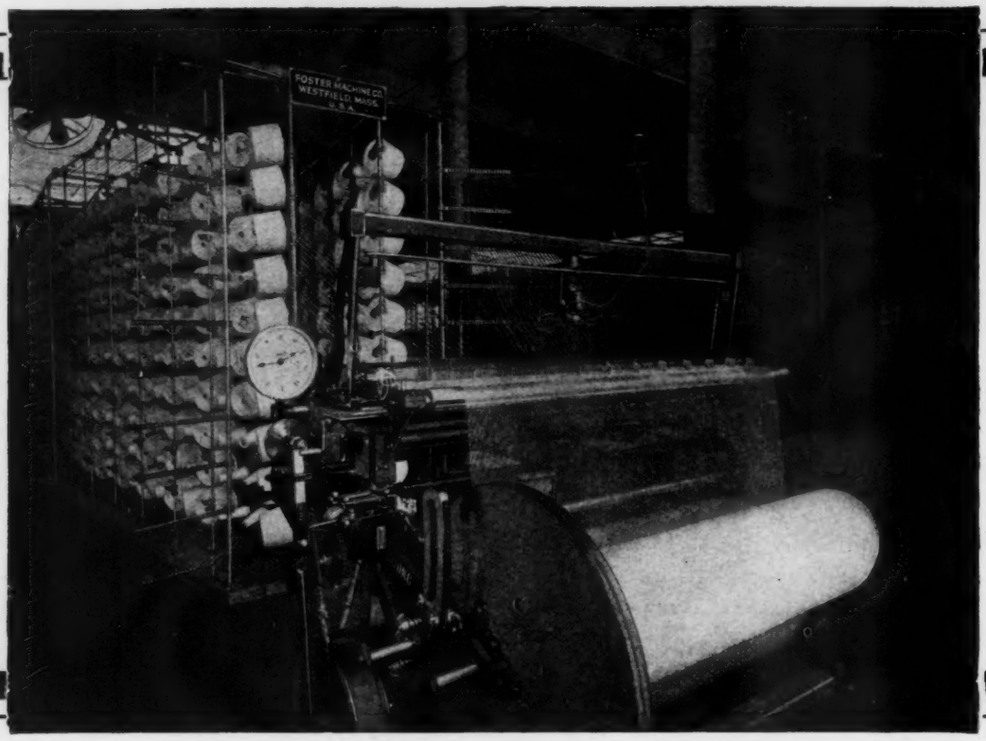
Send me a copy of "The ABC of Long Draft Spinning."

Name .....

Mill .....

City ..... State .....

FOSTER
CONE WARPING SYSTEM



The following points of superiority of the Foster Cone Warping System have been demonstrated under competitive conditions.

In the Cone Winding Process using the Foster Model 102 Winder—more pounds produced by the operative with the resulting lower winding costs per pound of yarn.

Economy in floor space and power—the highest possible winding speed depending on strength and quality of yarn and the necessity of producing warper packages free from chafed yarn and loose ends that cause warper stoppage.

Sturdy machine design and construction—minimum cost for replacements.

Operating conditions—end piecing movements reduced, promoting efficiency and preventing operative fatigue.

In the Warping Process using the Foster Magazine Cone Creel—free drawing from the cone with exact even tensioning of each strand, eliminating tight and loose warp ends.

High Warping Speed with Stoppage for recreeling.

Each cone empties completely, eliminating stale yarn and waste.

Cones hold up to 4½ pounds of yarn (depending on the density of the material). This is an important item in lowering warping costs.

The Foster Model 102 Cone Warping Winder will be shown in operation at Southern Textile Exposition, Greenville, S. C. Space 231.

FOSTER MACHINE COMPANY
WESTFIELD, MASS.

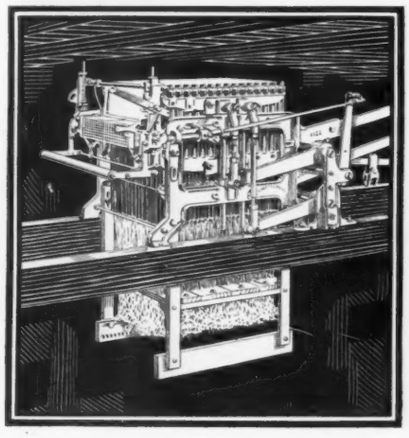
Fred P. Brooks, So. Representative, P. O. Box 941, Atlanta, Ga.

Are You Sure You're Getting ALL Your Profit?

IMPULSIVELY—the answer may be "yes". Actually the answer may be "no". What is the answer?

Look to equipment and machinery. Look to operating costs. Is your production geared to the present cry for items of greater value at lesser cost? Or are you hopelessly or partly hamstrung by obsolescence—by the inability to meet today's prices at a profit?

Find the facts—and answer them with action! Action in replacing obsolete jacquards, among other things, with improved Halton's Jacquards. Action that nets your full profit per installation—because Halton's Jacquards perform more faithfully, at lower maintenance costs, and with greater versatility in pattern design. These are the reasons George Royle, Craftex Mills, and Empire Bed Spread are using them. They certainly help bring you more of the profits you're not getting now. Mechanical details? You'll find them all in our catalogue. We'll gladly send it, when you write. Do!



HALTON'S JACQUARDS

THOMAS HALTON'S SONS, "C" and Clearfield, Phila., Pa.

Selling Agents H. A. FORBES, P. O. Box 1663, PATERSON, N. J. . Tel. Lambert 385-92W
DENNIS J. DUNN, 5th and College Streets . . . . . CHARLOTTE, N. C.

YOU CAN BANK ON TUFFER

Not on first costs, perhaps, but in its superior results you can bank on Tuffer Card Clothing. As a quality product Tuffer gives unusually long life and service—resulting in many more pounds of production and less waste in stock.

Tuffer Card Clothing takes grinding easily and perfectly, holds point longer, is easier to strip and affords closer setting without injury to the point. This means much more even carding.

You will find the Howard Organization ready at all times to help you get better results and economical operation. Let our representatives show you the true meaning of prompt, personal service . . . . and a fair deal on all card clothing problems.

Tuffer Card Clothing is guaranteed against shelling out.

We'll be looking for you at our Booth
No. 474-5-6 at the Greenville Show

HOWARD PRODUCTS

CARD CLOTHING
NAPPER CLOTHING
WIRE HEDDLES
CYLINDER FILLETS
DOFFER FILLETS
HAND STRIPPING CARDS
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STRICKLES
TOP FLATS RECOVERED

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TRADE MARK TUFFER REG. U.S. PAT. OFF.

CARD CLOTHING

ABBOTT CONE WINDERS

Successfully improve quality and reduce winding costs in high speed warper installations. Then follow better and cheaper warps and reduced loom breakage.

A Quality Cone

Lowest Bobbin Tie-in Cost

Speeds to 800 Yards Per Minute with Any Taper

Cover the Whole Range of Cone Winding

See our demonstration at Greenville Oct. 17-22

Booths 214-215-241, 2nd Floor Main Building

ABBOTT MACHINE CO.

Southern Representative

A. S. THOMAS GREENVILLE, S. C.

OVER
500,000
BALES OF COTTON A YEAR

Are made into laps

on

Aldrich Synchronized Single Process Pickers

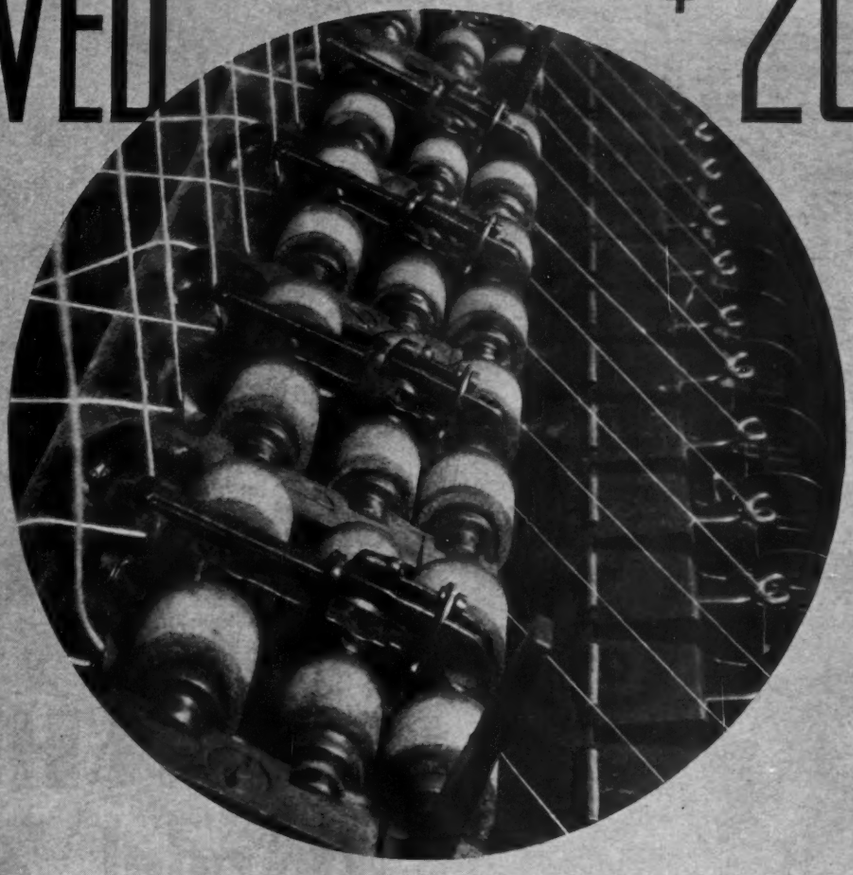
This System Does The Best Work at the Least Cost.

Made and installed by

AldricH MachinE

Greenwood **WorkS** S. Carolina

SAVED $20.55



PER MILLION SPINDLE HOURS

SOUTH CAROLINA MILL REDUCES ROLL COVERING COST $99.30 PER 100,000 POUNDS OF FINISHED CLOTH.

WHAT A RECORD! A saving of $99.30 with Armstrong's Seamless Cork Rolls per 100,000 pounds of cloth . . . 15,308 spindle hours without replacement . . . 72% reduction in roll covering costs for this South Carolina mill (name on request) in the last three years! These are not just test figures—they are *actual results on large scale production.*

Dare you ignore these savings? With over 100 mills (25% of the country's total spindlage) running on Armstrong's Seamless Cork Cots can you shut your eyes to the lower production costs these roll covers yield?

How do they do it? Here's the answer. Armstrong's Seamless Cork Cots cost a little more at first but they *wear six times as long.* "Running conditions are actually *improved,*" say many mills operating under all sorts of conditions and spinning from 2s to 120s.

Send for free book of mill data

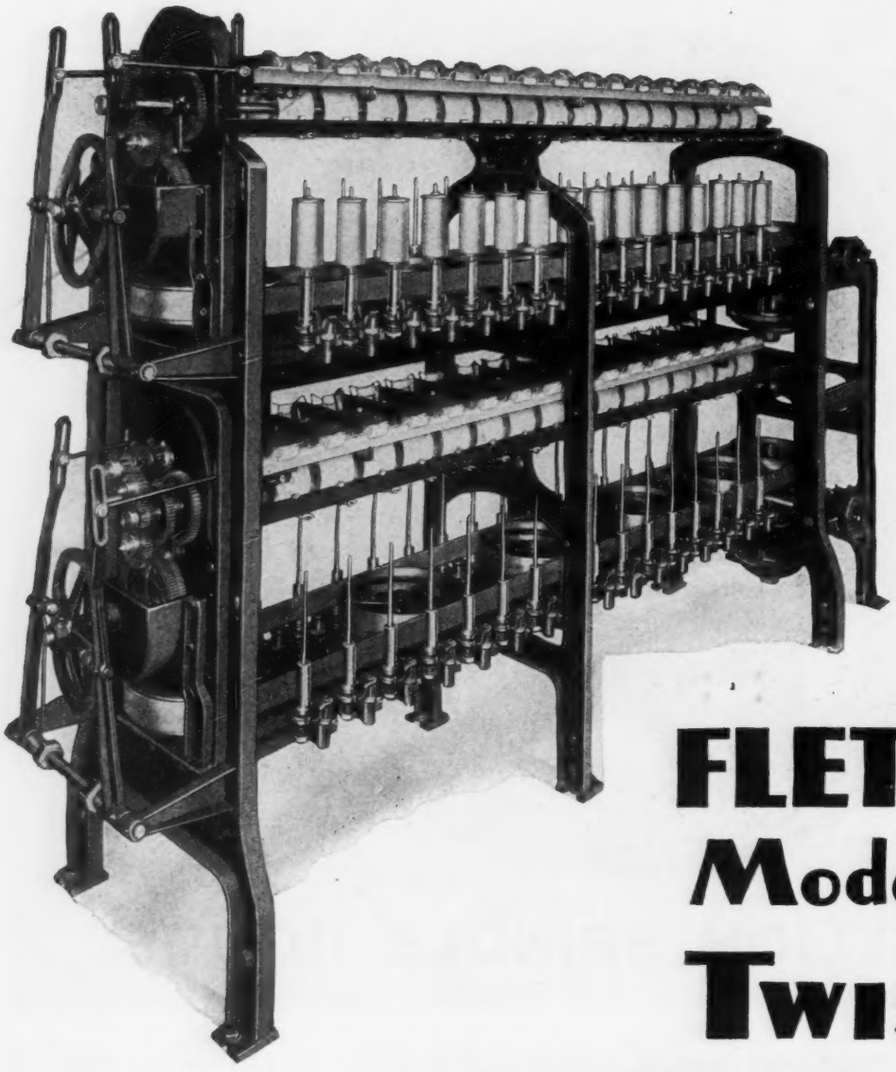
Your free copy of "The Facts about Armstrong's Seamless Cork Cots" is waiting. Send for it *now.* Address Armstrong Cork & Insulation Company, Cork Division, 923 Arch Street, Lancaster, Pennsylvania.

Armstrong's (A) *Product*

Armstrong's SEAMLESS *Cork Cots*

For Spinning and Card Room Rolls

THE TWISTER FOR CREPE TWIST!



FLETCHER Model 33 TWISTER

with UNIT CONTROL

Thoroughly proven principles of engineering and design, as embodied in FLETCHER Model 33 TWISTER, have stood the test of exacting operating conditions. Economies and conveniences claimed, are being attested.

"Unit Control" is compact—self contained; and controls both twist and traverse from one end. This is a FLETCHER development with obvious advantages.

One year's supply of cool, clean oil in "Oilwell" spindles—large, power saving, idler pulleys; lapless endless spindle belt; sliding motor drive—and all in STANDARD EQUIPMENT.

Write for Descriptive Bulletin.

FLETCHER

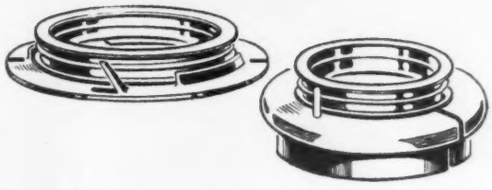
THROWING MACHINERY FOR SILK AND RAYON - - CENTRIFUGAL EXTRACTORS - - NARROW FABRIC LOOMS

FLETCHER WORKS • GLENWOOD AVENUE AND SECOND STREET • PHILADELPHIA

FORMERLY SCHAUM AND UHLINGER - ESTABLISHED 1850

The Extra-wear Spinning Ring

DIAMOND FINISH



Ring Holders by Ring Makers

We furnish all types of ring holders in steel, cast iron, brass, aluminum. Furthermore, because we have a thorough knowledge of rings we guarantee to give you exactly the right fit and pressure for each style of ring. Order DIAMOND FINISH —ring holders by ring makers!

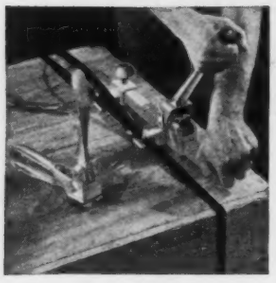
Free samples gladly sent

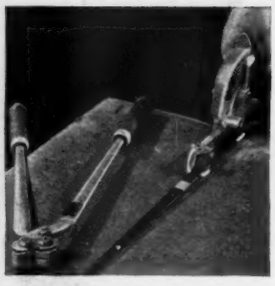
Whitinsville (Mass.) SPINNING RING CO.

Devoted to making "DIAMOND FINISH" Spinning and Twister Rings since

1873

ACME





Bale and Box Strapping Equipment

Acme Steel Company has served the textile industry conscientiously and well for nearly a half century with their requirements for bale tie band and box strapping. No stone has been left unturned in the development of new equipment, in co-operation with the mills, to advance the science of better and more economical packing..... Let us help you with your packing problems. Our representatives, working out of branches listed below, are at your service..... Call on them—or the whole Acme company.

ACME STEEL COMPANY

General Offices 2832-40 Archer Ave., Chicago — SAVE WITH STEEL — *Branches and Sales Offices in Principal Cities*

BROOKLYN, N. Y. ATLANTA, GA. CHARLOTTE, N. C. NEW ORLEANS, LA.

STEEL

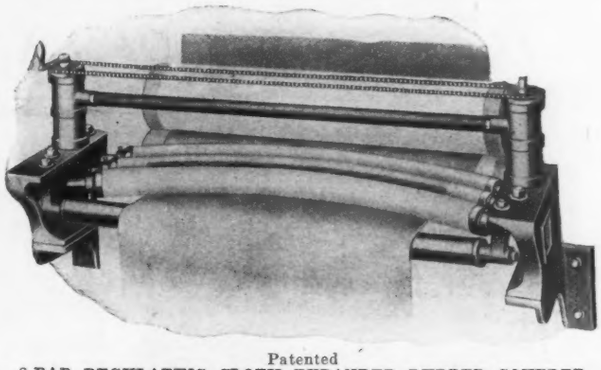
THOMAS LEYLAND MACHINERY CO.

F. T. WALSH, President and Treasurer

Office and Works: READVILLE, MASS.

Sole Manufacturers of the

IMPROVED REGULATING CLOTH EXPANDERS



Patented
3-BAR REGULATING CLOTH EXPANDER RUBBER COVERED

The expanders are manufactured with one, two, three and five bars equipped with either **METAL CLUTCHES** or **RUBBER COVERED** and suitable for Water Mangles, Starch Mangles, Dry Cans, Calenders, Mercerizing and Dyeing Machines, Winders and for machines combining Paper and Cloth, for Rubber Goods, and for all classes of **COTTON, RAYON AND SILK** piece goods.

Manufacturers of

FREE RUNNING SCUTCHERS, with patented NEW IDEA SCROLL ROLLS. Also STRAIGHT and ANGULAR GUIDES

See us at our Booth No. 431, Annex No. 1, Southern Textile Exposition, Greenville, S. C.

THE LEYLAND WALSH COMPANY

READVILLE, MASS.

Formerly

Thomas Leyland & Company, Inc.

Cable Address
NADES BOSTON

F. T. Walsh
Proprietor & Manager

Telephones { 0100
HYDE PARK { 0101

Importers of and Dealers in

We are the agents for the best, largest and up-to-date manufacturers of Lappings and Blankets—the quality of whose goods have been known and recognized, all over the world, for over a half century.
Correspondence solicited.

LAPPINGS Strong Twill . . Extra Strong Twill . . Fine Twill . . Superfine Twill . . Fine Plain . . Extra Super Fine Plain.

Supplied for Machine Printers in all the various widths and qualities.

BLANKETS—Various widths and lengths.

ENDLESS MACKINTOSH BLANKETS—Regular quality.

ENDLESS MACKINTOSH BLANKETS SPECIAL—this quality unbeatable for money values, and continuous wear and service.

ENDLESS REDDAWAY—All COTTON Blankets practically seamless.

ENDLESS WOOLEN BLANKETS.

STEAMING BLANKETS.

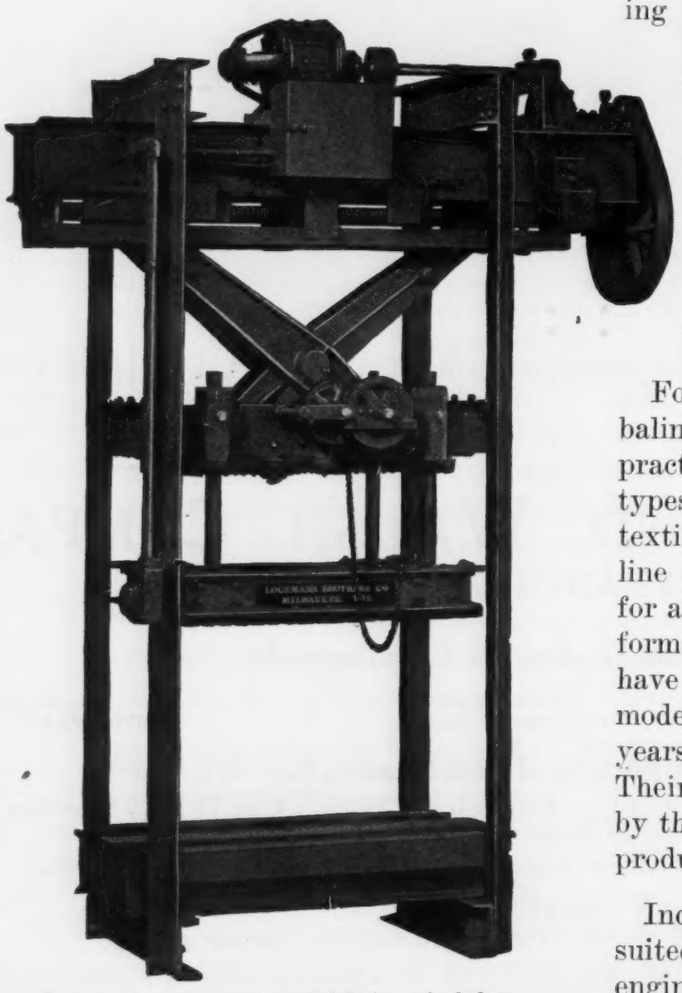
PALMER BLANKETS.

WOOLEN JACKETS.

See us at our Booth No. 431, Annex No. 1, Southern Textile Exposition, Greenville, S. C.

LOGEMANN——

THE VERDICT OF EXPERIENCE



Logemann easy operating finished goods balers are serving daily in scores of textile mills.

Know before you buy any baling press equipment what the verdict of Logemann experience has been. What organizations have used Logemann presses and for how long? What satisfaction have they given? Have they helped make profits and paid for themselves as well?

For over 50 years Logemann baling presses have been giving practical reliable results. Eighty types and capacities serve the textile industry in a complete line of equipment that is ready for any type of installation. Informed plant superintendents have seen their selection of these models stand the acid test of years of hard service usage. Their judgment has been proven by the actual figures of low cost production records.

Inquire as to the press best suited for your needs. Let our engineers assist you in your problems. They are at your service to profit prove Logemann installations. Write

LOGEMANN BROTHERS CO.

3154 W. Burleigh Street, Milwaukee, Wis.

BRANCH OFFICES IN ALL PRINCIPAL CITIES

N O W —

HERMAS

Introduces the Last Word in Cloth Room Equipment

THE COMBINATION BRUSH AND SHEAR

Occupies only 50% of the space formerly needed for the two machines.

Fully Automatic

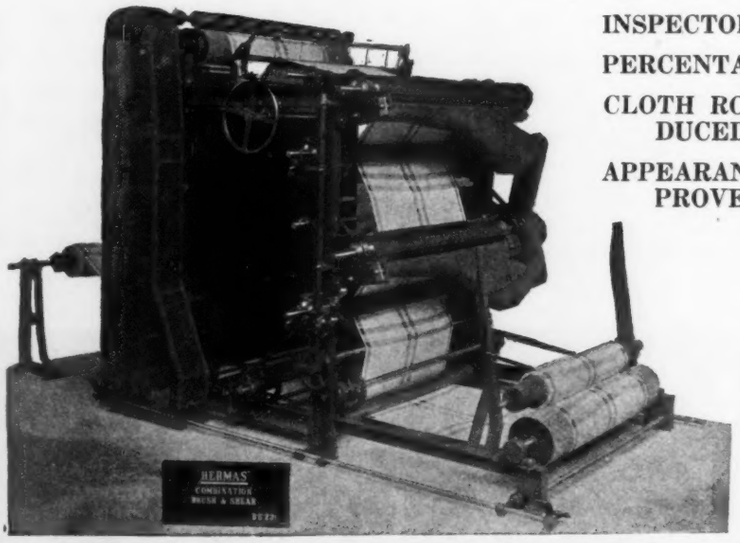
Brushes are instantly adjusted for heavy or light brushing, or no brushing at all, while the machine is in operation.

Think what this means to the manufacturer of several varied lines.

Any number of combination of garnet, wire, fiber, or bristle brushes.

Brushes have individual suction which carries away all dirt, as soon as it is brushed from the cloth.

Shear trims off all hanging strings, small loops, etc., from the selvages and both sides of the cloth in one pass at high speed.



ALL HAND TRIMMING ELIMINATED.

INSPECTORS PRODUCTION INCREASED.

PERCENTAGE OF SECONDS REDUCED.

CLOTH ROOM EXPENSE GREATLY REDUCED.

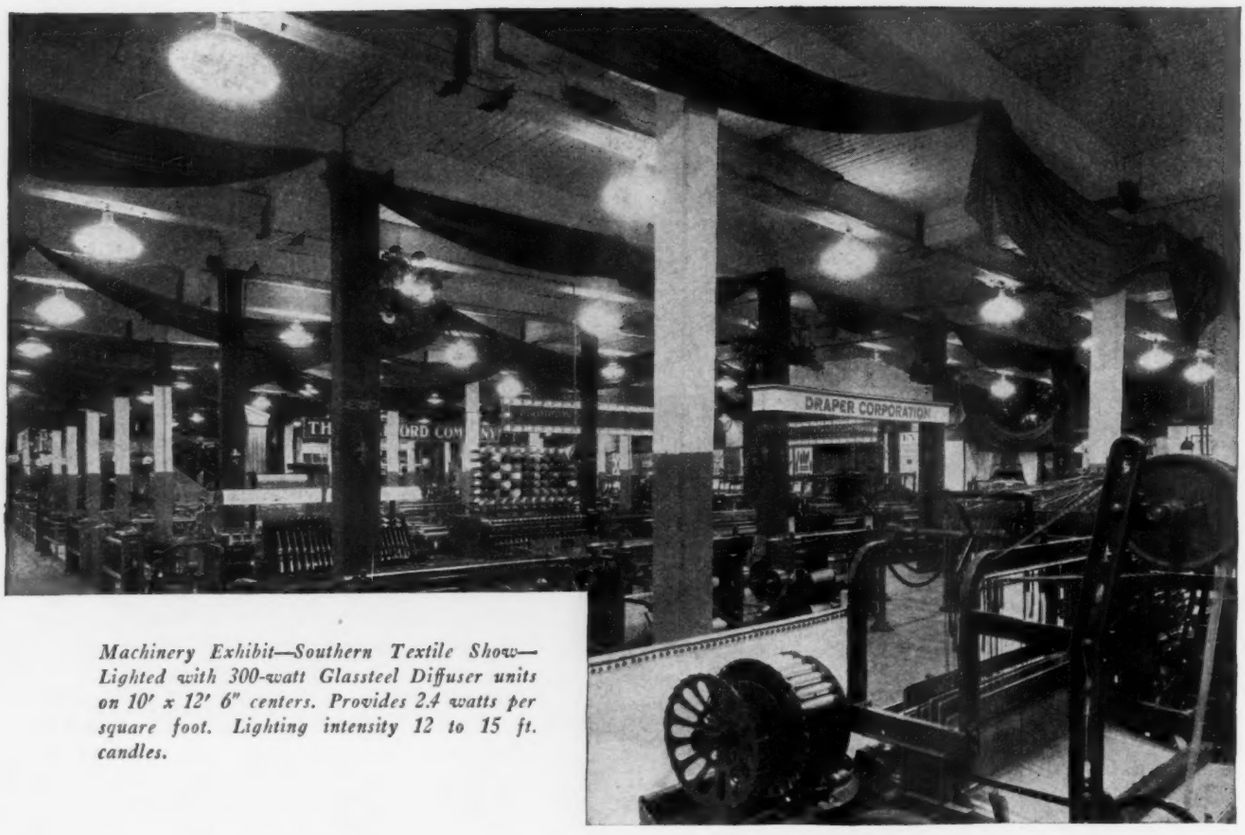
APPEARANCE OF CLOTH GREATLY IMPROVED.

See this machine at Greenville—Booth 133

HERMAS MACHINE COMPANY
HAWTHORNE, N. J.

Southern Representatives

CAROLINA SPECIALTY CO.
Charlotte, N. C.



Machinery Exhibit—Southern Textile Show—Lighted with 300-watt Glassteel Diffuser units on 10′ x 12′ 6″ centers. Provides 2.4 watts per square foot. Lighting intensity 12 to 15 ft. candles.

• *Lighting up the* BIG SHOW

THIS picture of the main machinery exhibit at the Southern Textile Show clearly brings out the importance of good lighting for machinery. Note how every detail stands out without the aid of local lighting. Note the absence of shadow or glare. Visitors could easily see every part of the machinery.

Good lighting is even more important for machinery in action. In the fight to lower production costs, and avoid loss through waste, spoilage and accidents, the well lighted mill stands in the front rank.

Shadowless, glareless lighting that guards quality of product and insures greater economy through greater efficiency is available to every manufacturer.

The same engineers who planned the splendid lighting for the Textile Show will check your lighting without charge to devise a lighting system for your mill that will give you the upper hand in the battle to maintain quality of product and cut operating expense.

The services of our engineers are available without charge. Write General Electric Company, Nela Park, Cleveland, Ohio.

GENERAL ELECTRIC

MAZDA LAMPS

WARNING to PROPERTY OWNERS

TODAY a letter came to my desk that deeply impressed me. It was written by a woman — the mother in a typical American family. Her little home had been saved from foreclosure by a coat of new paint, for which a part of their meager savings had been paid.

Those few gallons of fresh paint had so revived the appearance and enhanced the value of the property that the mortgagee had consented to renew the loan . . . and the little home was saved.

I could not help thinking of the *thousands* of homes and buildings that are shabby and unattractive today due to several years of neglected painting; of the millions of home owners who, because of reduced incomes and enforced economy, have been obliged to sacrifice painting for taxes, interest, assessments, to say nothing of food, clothing, heat and other essentials of comfort and health.

You have seen these paint-starved houses and buildings, as have I. They are everywhere about you. Perhaps your home is included.

Do you understand what they signify? Do you realize what will happen to wood or metal that is literally naked of paint if these houses and buildings face the attack of another season of rain, snow, ice, and frost?

Never in the history of our country has the situation been paralleled. Property owners face an added burden of expense amounting to millions of dollars *for repairs and replacements* next spring.

And the crisis, in my opinion, will be reached *this coming winter* when paint of four, five, and even six years exposure to the weather will be unable to resist the elements — when badly weathered wood and metal will be easy prey for rot, rust and decay.

Today the big question facing thousands of property owners is plain. It is "*paint* or *pay.*" Either you must invest *a little* this fall in new paint or you must take the risk of paying many times the cost of paint to repair the damage done by rot, rust and decay this winter.

Even at the sacrifice of other things, have your house or buildings completely repainted now. No investment you can make will pay better dividends. And nothing you can buy will make you and your family *feel* so uplifted and cheerful.

If you cannot arrange to do a complete repainting job now, at least *give the badly weathered places a coat or two of protecting paint.*

Look especially, to the window sills, thresholds, outdoor porches and steps; the joints of porch railings and palings; the bases of pillars; the edges of eaves; the roof; the gutters and down spouts. These are the *vital spots* where water lodges—where ice and frost settle—where rot and rust attack first.

A few dollars' worth of good paint, applied now, will protect these vital spots—will tide you over this crucial winter. And it will probably save you a much greater expense for repairs and replacements next spring and summer.

Under existing conditions, you may be tempted to buy a cheap trashy paint because of its low price. I hope you will not make this costly mistake.

Even on sound lumber, inferior paint is a poor bargain. But on weathered wood, which is very porous, such paint is worse than useless. It gives you a false feeling of security and leaves you without protection.

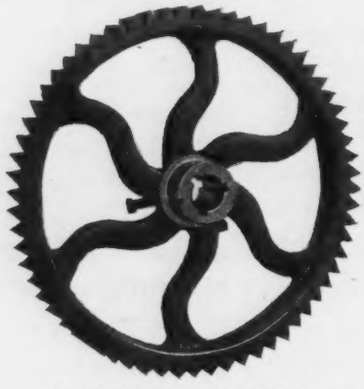
Prices of well-known, established brands of paint are now the lowest in fifteen years. Enough good, dependable paint can be purchased for a few dollars to protect all the badly weathered surfaces on your building.

Again I repeat, do a complete job this fall if you can. But at least do the vital *exposed places* before it is *"too late."*

President
THE SHERWIN-WILLIAMS CO.

There Is No "Guess Work" In These Superior Parts

Hopper Stand Assembly for Draper Loom on which jigs were used in the manufacture of all parts.



Camshaft Gear for Draper Loom.

REAL experience and knowledge of textile equipment and the weak points of many parts, combined with an honest and conscientious determination to produce BETTER parts, and not parts "just as good", is the reason why HENDERSON TEXTILE PARTS have proven so successful, dependable and economical.

Skilled mechanics, faithful to detail and precision, employing efficient equipment and superior quality basic materials mean real satisfaction to the user.

Henderson Superior Parts include:

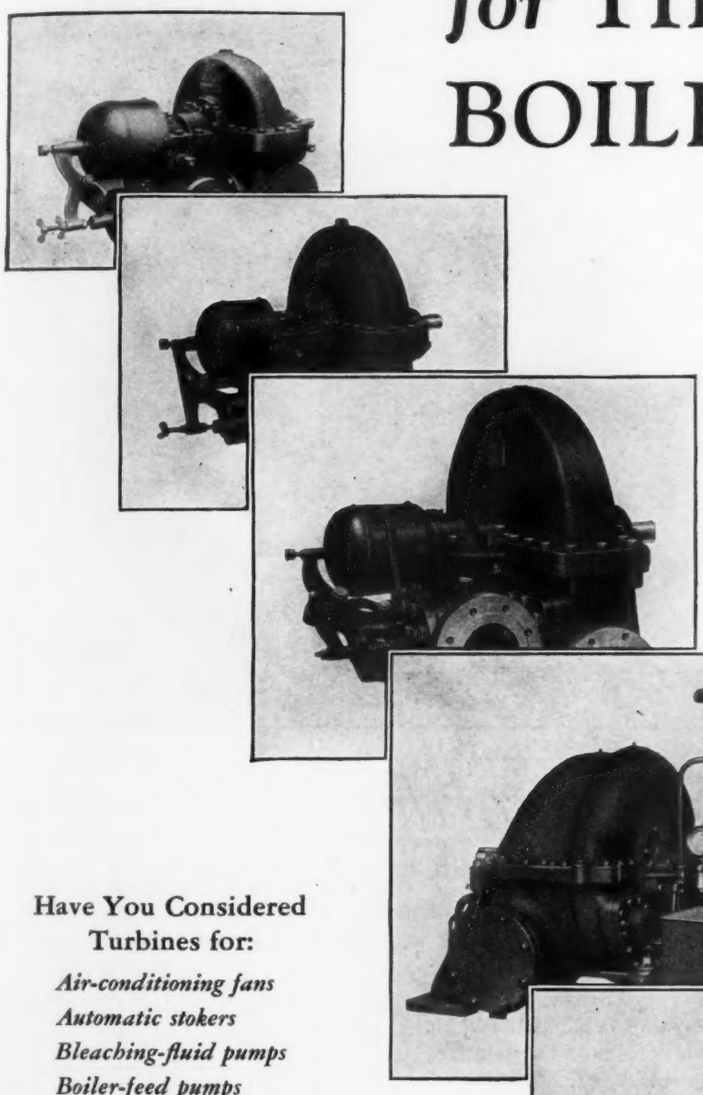
Picker Parts for Kitson, Atherton and Woonsocket Pickers; New Rings for C. & K. Friction Gears with Straight or Spiral Teeth; Gears and Bobbin Spindle Gears for all makes of machinery; Loom Parts for Draper, Stafford, Mason and C. & K. Looms; Beam Heads; Spiral, Bevel and Spur Gears; Gray Iron Castings; etc.

Our plant is running full time and immediate shipment is assured.

HENDERSON FOUNDRY & MACHINE WORKS,
HAMPTON, GEORGIA

HENDERSON
TEXTILE MACHINERY AND REPAIR PARTS

Mechanical-Drive Turbines for TIRED BOILER PLANTS



IF the demands on your boiler plant suddenly increase, will it show signs of getting weary? If so, now is the time to consider how to get maximum power from the steam you generate. With G-E mechanical-drive turbines you can:

1. Provide low-pressure steam where only high-pressure is available.
2. Utilize steam which is now being wasted.
3. Improve the over-all heat-balance condition in your plant.

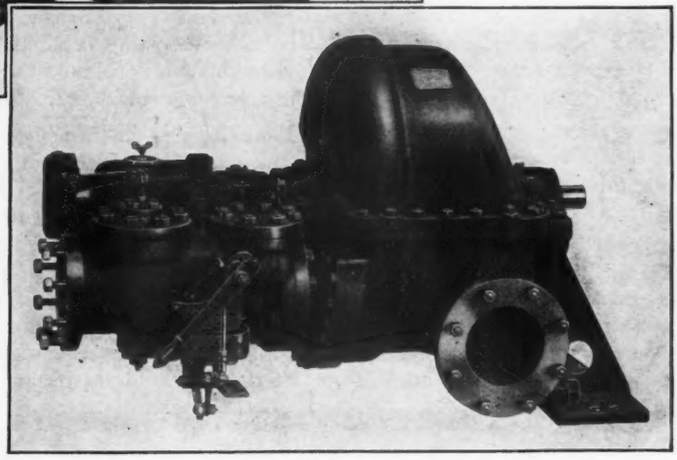
—and at the same time drive pumps, compressors, fans, pulverizers, or extractors.

Whatever the need, if a mechanical-drive turbine can be used, there is a G-E turbine which will fit, whether it is for continuous or stand-by service, and whether it is installed indoors or out.

Let us send you further information. Just write General Electric, Schenectady, N. Y.

Have You Considered Turbines for:

Air-conditioning fans
Automatic stokers
Bleaching-fluid pumps
Boiler-feed pumps
Chemical-solution pumps
Coal pulverizers
Condensate pumps
Dye pumps
Forced-draft fans
Fuel-oil-circulating pumps
Hot-water pumps
Induced-draft fans
Washing-solution pumps
Water-circulating pumps

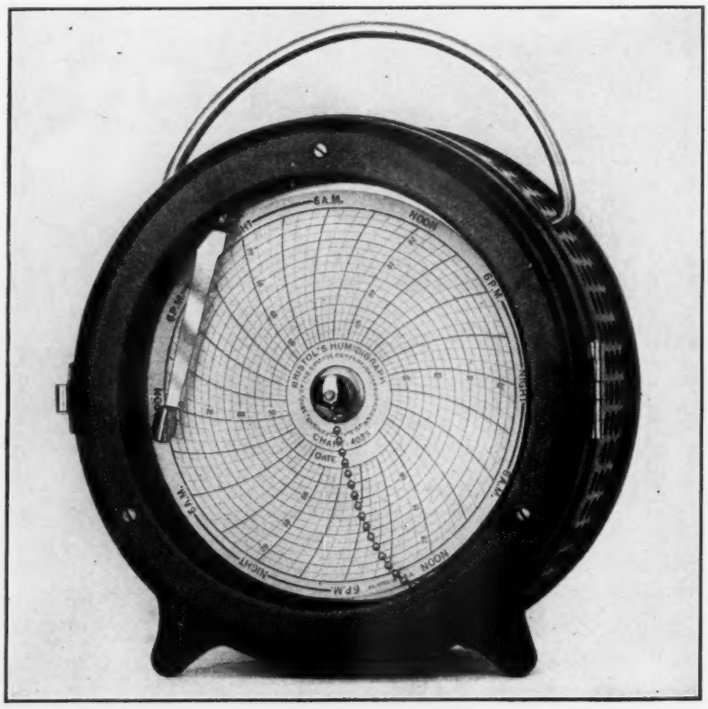


175-53

GENERAL ELECTRIC

Come to BOOTH 233-D

SOUTHERN TEXTILE EXPOSITION, GREENVILLE, S.C., OCTOBER 17-22, 1932



. . . and see this novel

Direct Reading Relative Humidity Recorder . . .

This handy Humidigraph is just the instrument you will want for checking the atmospheric conditions of your carding, spinning, weaving and knitting operations.

It is DIRECT READING. You can tell at a glance just what the relative humidity is. There's no fuss or bother in using this convenient little instrument; no need for referring to mathematical tables, no computations, no fussing with water or fans.

Sensitive, accurate, built for every day mill service, BRISTOL'S Humidigraph gives a continuous 72 hour chart record of the relative humidity, which not only serves as an aid in controlling present operations, but also can be filed away for future reference and guidance. Supplied in a round light-weight case, made of corrosion-resisting metal, BRISTOL'S Humidigraph is suitable for portable use, or for permanent mounting.

Examine this instrument carefully. Ask questions. Then think how inexpensively it can help you control humidity and so overcome the natural tendency of textile fibres to repel each other during yarn preparation; also how it can assist in reducing costly waste, in standardizing uniformity in product, reducing breakage of threads, in increasing production.

While you're in our Booth, be sure to look over the other BRISTOL'S Recorders on exhibition. Ask our engineer to tell you how these, too, can help in improving your processing.

We'll look forward to meeting you.

Ask for Information on These, Too!

Recording Thermometers for use in:
Carbonizing, degumming, drying, dyeing, kiers peroxide bleaching, scouring, slashing. Also on kettles for sizing and desizing, starch mangles and back fillers. Also for ageing, crabs, hot water heaters, presses, soapers in print work, weighing tanks.

Industrial Stem Thermometers for use in:
Carbonizing, cloth washing, mercerizing, starch paste making.

Automatic Pressure Control for:
Hot water heaters, agers and dry cans.

Recording Pressure Gauges for:
Agers, compressed air equipment, decatizers, semi-decatizers, dry cans, hot water heaters.

Recording Liquid Level Gauges:
For use in wet processes.

Recording Tachometers:
For speed control of machines.

Recording Ammeters, Voltmeters, Wattmeters, and Frequency Meters.

THE BRISTOL COMPANY, WATERBURY, CONNECTICUT

Branch Offices: Akron, Birmingham, Boston, Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, St. Louis, San Francisco

TRADE MARK

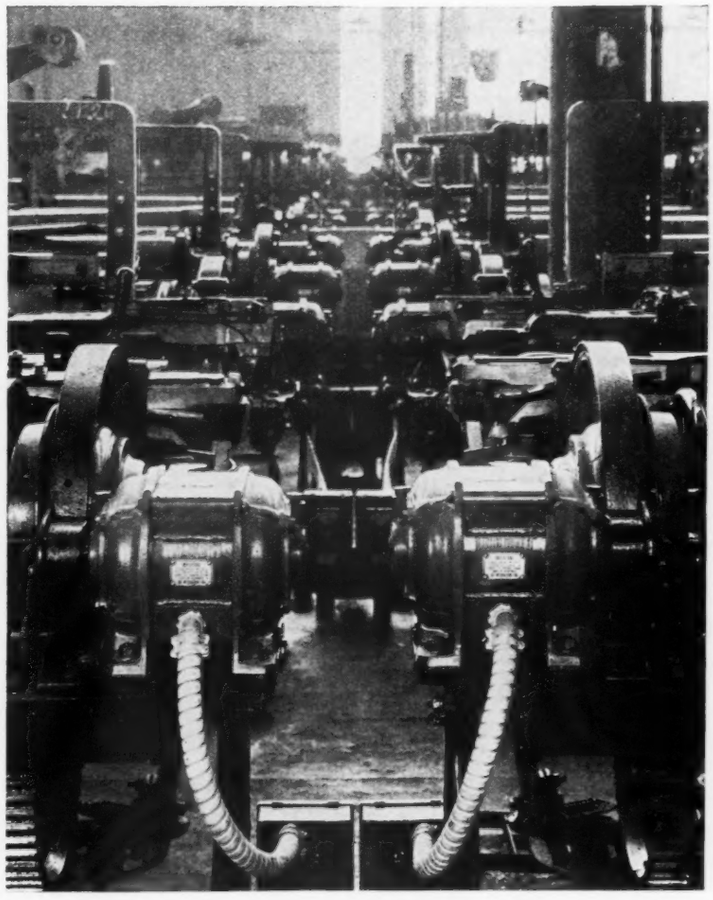
BRISTOL'S

REG. U.S. PAT. OFF.

INSTRUMENTS FOR INDICATING RECORDING CONTROLLING SINCE 1889

YOU CAN MEET *short delivery dates*

WITH THIS LOOM DRIVE



Typical installation of Westinghouse Loom Drives in a Southern Cotton Mill. The Fuseless Loom Switches are mounted in pairs on double pedestals.

DURING these days of "hand-to-mouth" buying, when your customers want delivery of cloth "yesterday"—you can't afford to take chances on loom drive equipment. Mills equipped to offer the shortest delivery dates stand the best chance of obtaining the going business.

Such abnormal production conditions prove the in-built stamina and reliability of Westinghouse Loom Drive. It can be depended upon for it was designed to meet such working conditions. High efficiency and high power factor enable the motor to do its work economically. Great mechanical strength and high overload capacity permit it to give continuous and unfailing service under stress.

The motor starter also is designed to assure uninterrupted, reliable service. The Built-in Watchman Thermostat guards the motor against damage from excessive overloads by tripping open the switch. Blown fuses and other devices that cause production delays are eliminated. To restore service the switch can be reset by any operator—quickly and safely.

Write our nearest office or mail the coupon for full information.

T 79265

Westinghouse

Quality workmanship guarantees every Westinghouse product

SEND FOR BOOKLET

Westinghouse Electric & Manufacturing Company
Room 2 N—East Pittsburgh, Pa.

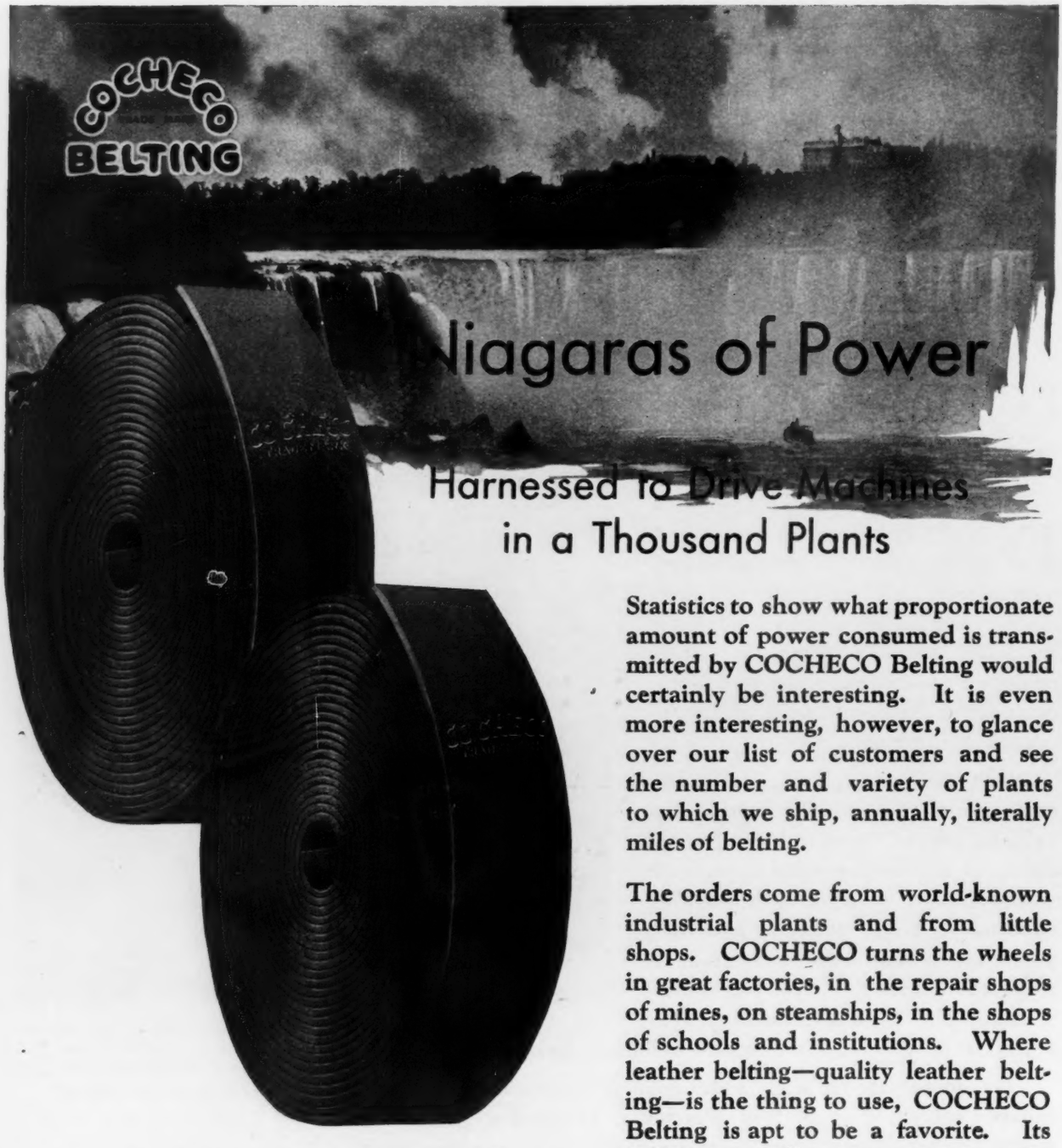
Gentlemen: Please send me a copy of L. 1289-A.

Name .....

Company .....

Address .....

City ..... *State* ..... C 10-32



Harnessed to Drive Machines in a Thousand Plants

Statistics to show what proportionate amount of power consumed is transmitted by COCHECO Belting would certainly be interesting. It is even more interesting, however, to glance over our list of customers and see the number and variety of plants to which we ship, annually, literally miles of belting.

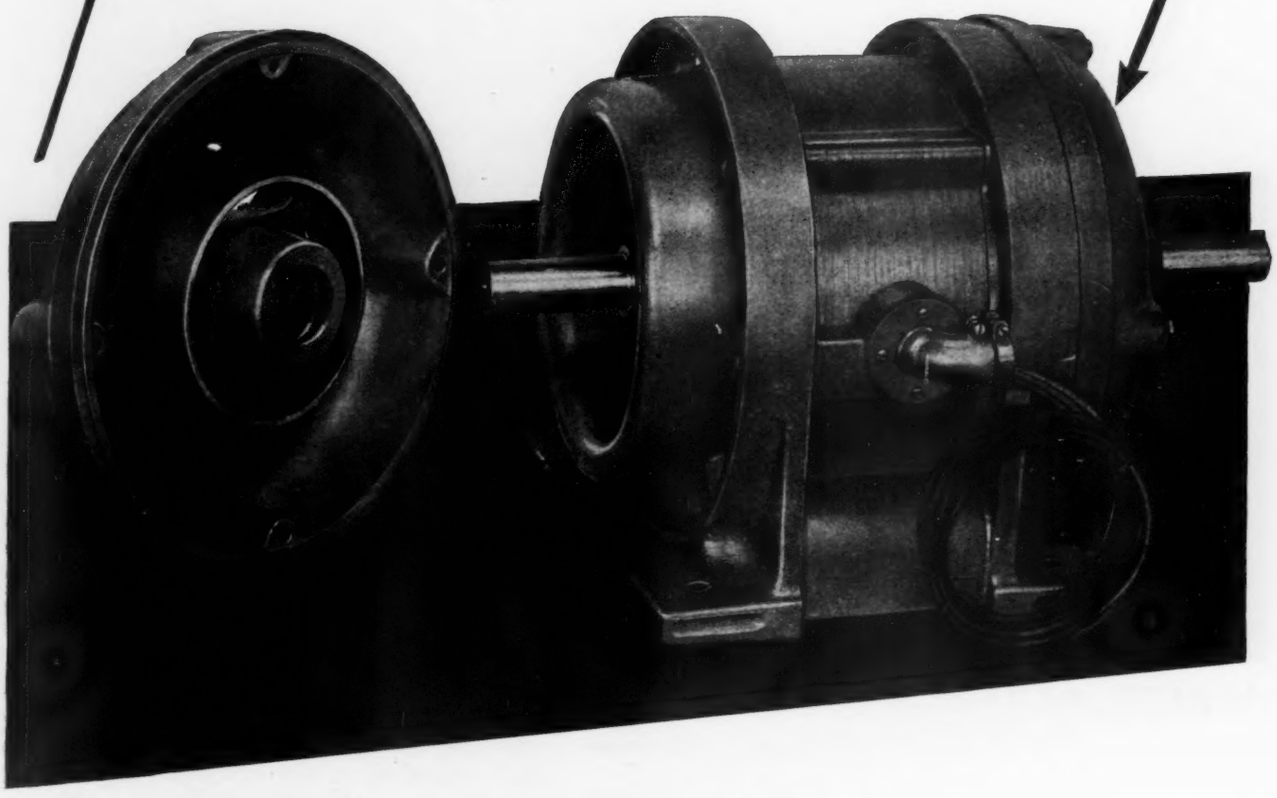
The orders come from world-known industrial plants and from little shops. COCHECO turns the wheels in great factories, in the repair shops of mines, on steamships, in the shops of schools and institutions. Where leather belting—quality leather belting—is the thing to use, COCHECO Belting is apt to be a favorite. Its inherent quality guarantees satisfaction—and satisfied customers have built the reputation that keeps COCHECO where it is.

If you use leather belting you will be interested in our "Book on Belts" which shows how to judge quality and why it pays.

I. B. Williams & Sons, Dover, New Hampshire, U.S.A.

DETROIT CHICAGO GREENVILLE, S. C. NEW YORK PHILADELPHIA

Seal-Clad



THE ALLIS-CHALMERS OPEN TYPE SEAL-CLAD MOTOR is specially designed for use in the Textile Industry. Unobstructed air passages and smooth surfaces of all parts in the air paths permit free travel of lint. Such materials entering the motor are carried through and are expelled with the ventilating air.

This motor solves the heretofore troublesome problems encountered with Open Type Motors in lint laden atmosphere.

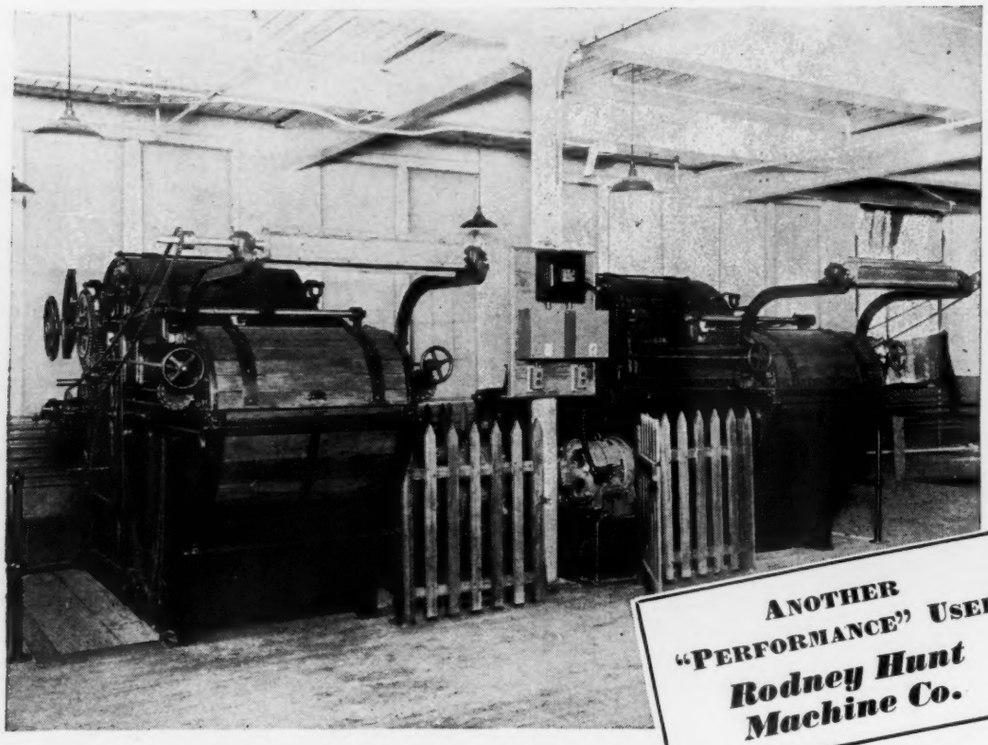
See it at the Greenville Show or write for descriptive Leaflet 2155.

ALLIS-CHALMERS MFG. CO., MILWAUKEE, WIS.

Allis-Chalmers motors are built in many sizes and types to fit practically every type of drive These include squirrel cage, slip-ring, synchronous, and direct current motors. Also enclosed fan-cooled, explosion-proof, vertical, flange type, self-cleaning, and gear motors.

ALLIS-CHALMERS

ALWAYS DEMANDED FOR SKF BEARINGS ARE DEPENDABLE



ANOTHER "PERFORMANCE" USER
Rodney Hunt Machine Co.

WHERE PERFORMANCE TAKES PREFERENCE OVER PRICE

On the vertical guide rolls, the front smooth rolls, and the unloading roll, of the Rodney Hunt "Express" Fulling Mill, SKF Bearings are intrusted with the job of maintaining the initial efficiency of the machine. Of their ability to do so continuously there is no doubt... years of experience have proved it in the textile industry. On such confidence does SKF Performance Take Preference Over Price.

Textile machinery must run smoothly and easily with comparatively little attention to meet the exacting demands of modern mills. Bearings must be free from wear and require no adjustments to maintain the highest standards of accuracy. There should be no trouble from oil leakage and consequent spoilage. All these conditions are easily met by SKF's . . . the selected ball bearings of leading manufacturers, mill owners and operators everywhere.

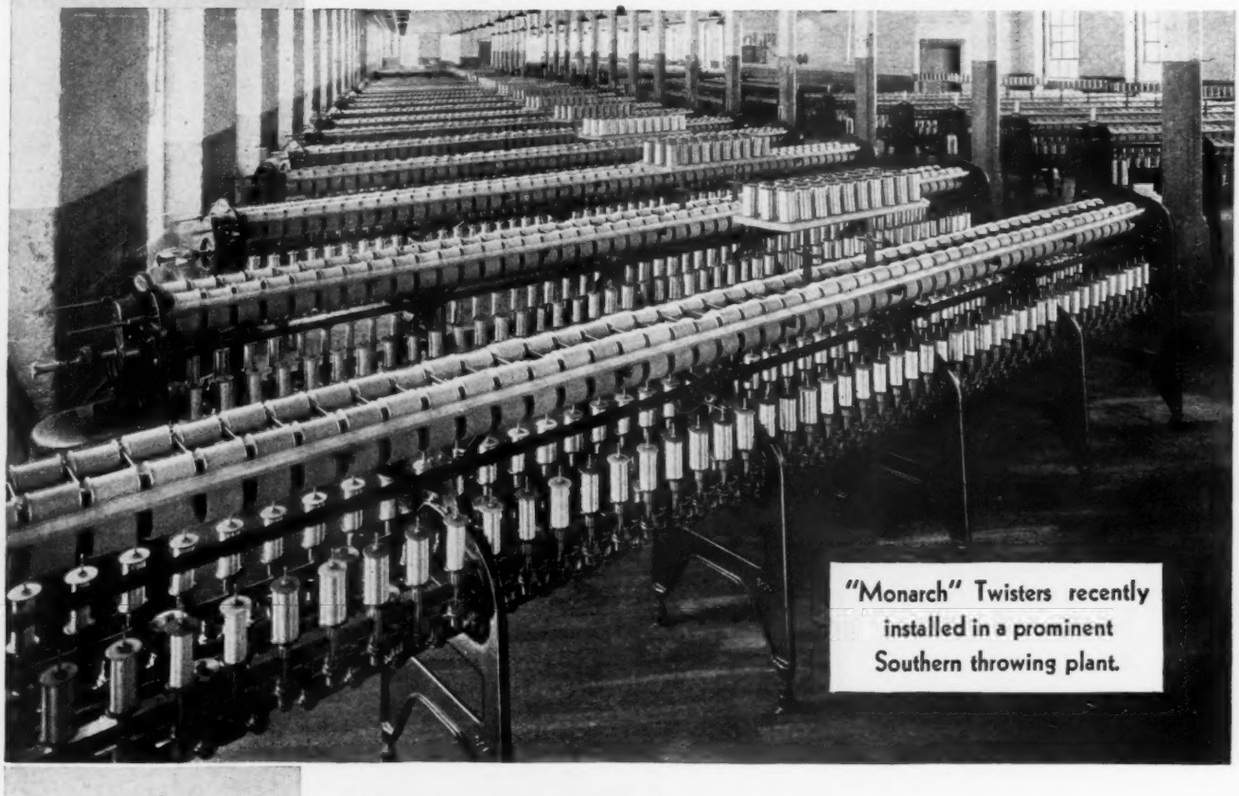
You may buy a bearing as a bargain but try and get a bargain out of using it, for nothing is apt to cost so much as a bearing that cost so little.

2927

SKF INDUSTRIES, INC. 40 EAST 34th STREET, NEW YORK, N.Y.

SKF
Ball and Roller Bearings

Prompt Shipment



"Monarch" Twisters recently installed in a prominent Southern throwing plant.

ATWOOD "Ball-Top" Spindle with New Maximum Oil Capacity Step

to meet Increased Production

Throwsters are stepping up production to meet the increased demands of their customers. If you too need increased production quickly, you can get prompt shipment of Atwood machines which exactly meet your individual requirements.

Atwood has unexcelled engineering and manufacturing facilities. Our records show the detailed specifications of all past shipments. This makes it safe to order by telegraph.

Atwood machines are trouble-free. Ample stocks of Atwood parts and accessories available for immediate shipment.

THE ATWOOD MACHINE COMPANY

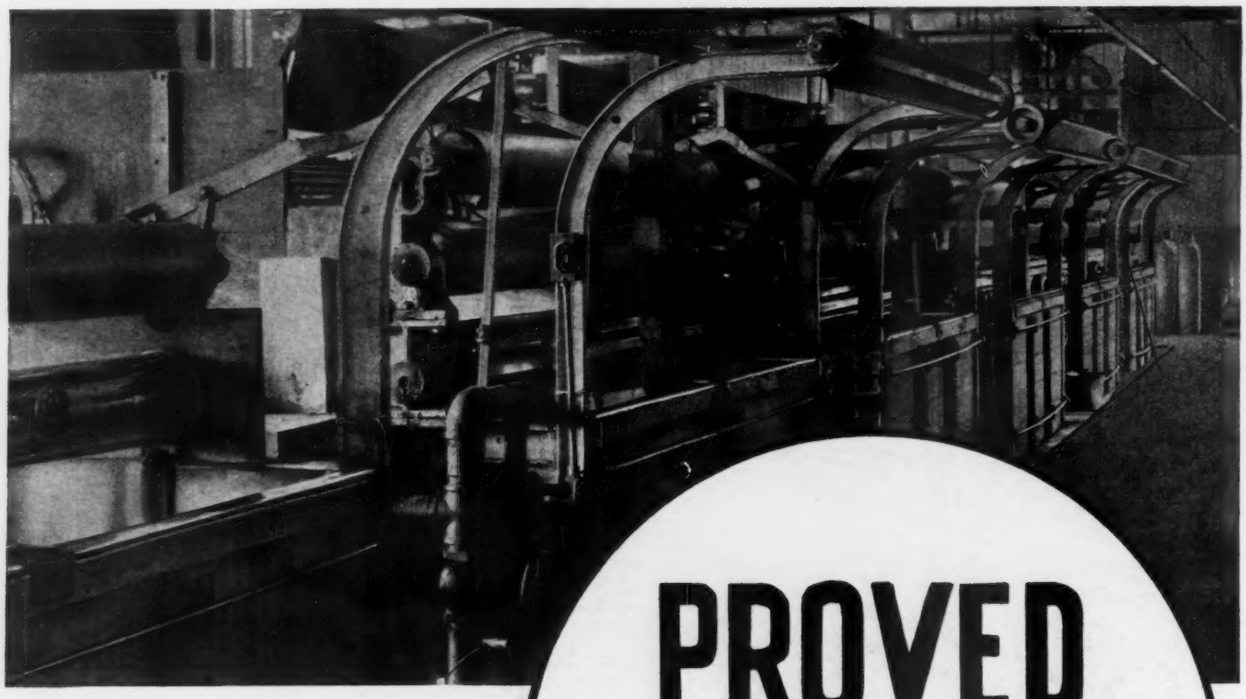
FOUNDED 1852

ATWOOD STONINGTON, CONN., U. S. A. ATWOOD

Sales Offices: New York Wilkes Barre, Pa. Stonington, Conn.
Charlotte, N. C. Los Angeles, Calif.

ATWOOD MACHINES THROW THE BULK OF AMERICA'S SILK AND RAYON

2347



Six Monel Metal lined, oval reel, knit goods piece dyeing machines fitted with Monel Metal reels, rolls, etc., at Brantford, Ont., plant of Penmans, Limited. Manufactured by GOOLD, SHAPLEY & MUIR CO., LTD., Brantford, Ont., Canada.

PROVED

Monel Metal piece dyeing machines protect sheer underwear fabrics

Penmans LIMITED

KNIT UNDERWEAR AND HOSIERY

OFFICE OF GENERAL MANAGER

Paris, Ontario, 23rd May, 1932.

Messrs. Goold, Shapley & Muir Co.Limited,
BRANTFORD,
Ontario.

Dear Sirs,-

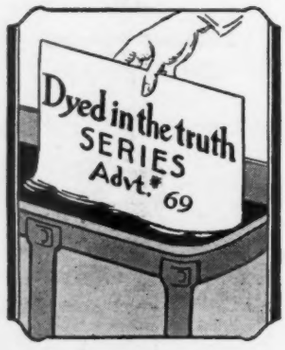
We are pleased to report that the monel metal knit goods piece dyeing machines, as supplied by you to our Brantford plant, are giving very good satisfaction. We are able with this machinery to process sheer underwear fabrics with a minimum of effort and no damage to the materials.

Yours very truly,
PENMANS LIMITED

H.W. Gundy
General Manager.

HWL/T.

You are cordially invited to visit our exhibit, Section No. 107, at the Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 17th to 22nd inclusive.



A HIGH NICKEL ALLOY
MONEL METAL
NICKEL ALLOYS PERFORM BETTER LONGER

Monel Metal is a registered trade-mark applied to an alloy containing approximately two-thirds Nickel and one-third copper. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL ST., NEW YORK, N. Y.

INCO MONEL METAL

Picking

PROFITS

PROFITS

OUT OF THE LOSS COLUMN ! . . .

For every successful concern in the textile field you will find a man or group of men who have been successful in picking profits out of the loss column. In other words, when the utmost in normal profits seemed to have been arrived at, they dug still deeper and found still more profits within their own costs.

One of the greatest possible sources of savings within production costs is that made possible through proper lubrication. It has been Alemite's privilege to make these savings possible in many of the leading mills of the country.

Alemite seeks only to demonstrate to you on your own equipment and under your own manufacturing conditions the economies to be derived from the consistent use of Alemite High Pressure Lubrication Systems used in conjunction with Alemite's Special Lubricants.

For such a demonstration in your own mills, mail the coupon provided below.

ALEMITE CORPORATION, (Division of Stewart-Warner) 617
2682 N. Crawford Avenue, Chicago, Ill.

Gentlemen: Please send me the details of Alemite profit plans for Industry.

Name .....

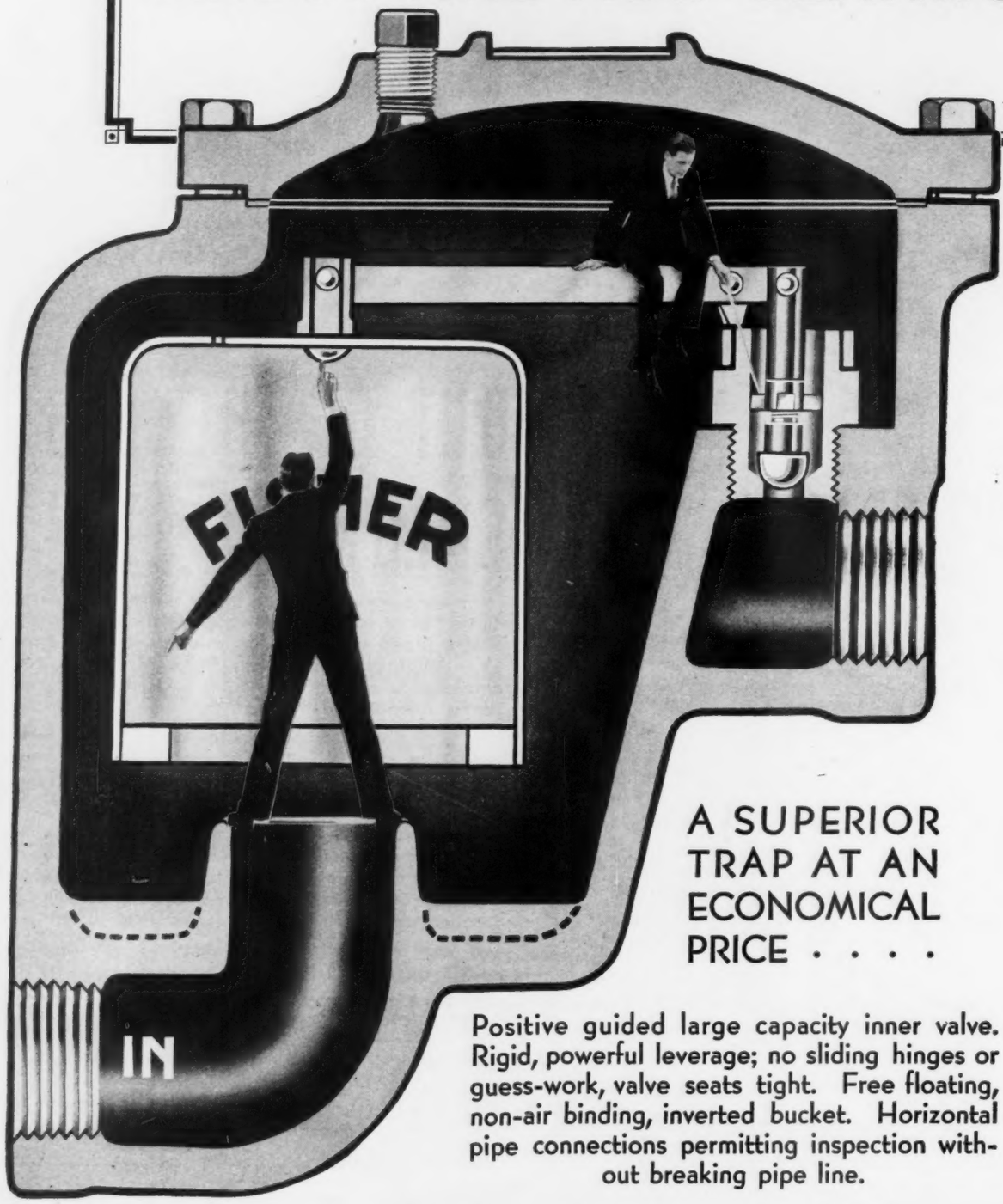
Address .....

City ..... State .....

ALEMITE

PIONEERS IN SPECIALIZED LUBRICATION

There is NO GUESSWORK ABOUT THIS TRAP SEATING.



A SUPERIOR TRAP AT AN ECONOMICAL PRICE . . . .

Positive guided large capacity inner valve. Rigid, powerful leverage; no sliding hinges or guess-work, valve seats tight. Free floating, non-air binding, inverted bucket. Horizontal pipe connections permitting inspection without breaking pipe line.

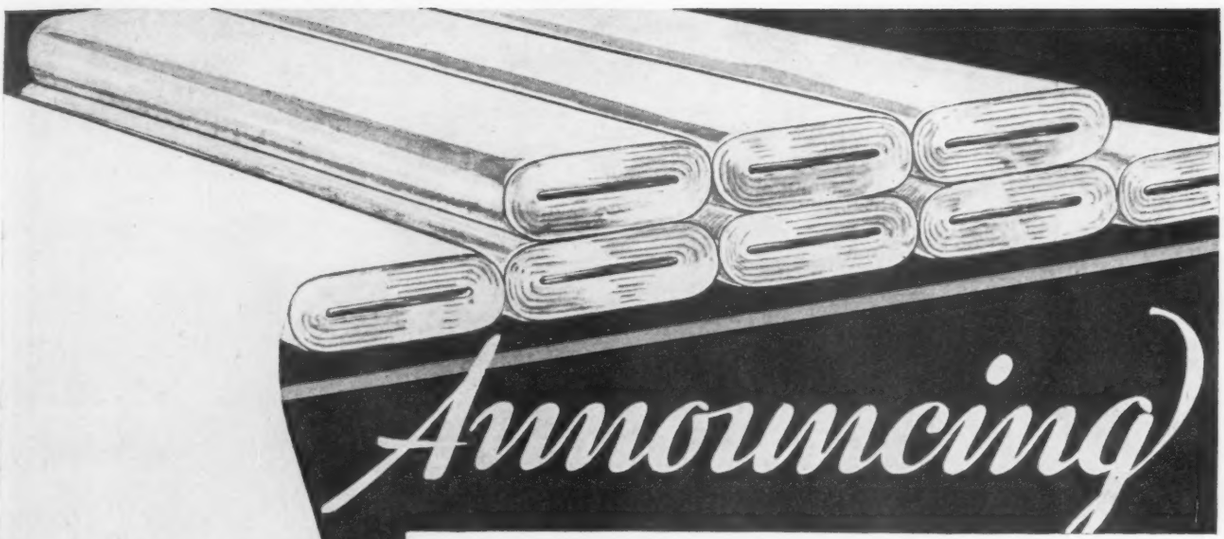
New Fisher Bulletin ST10 tells the interesting details and capacities of this most modern trap.

Fisher Governor Company

201 SOUTH FIRST AVENUE
MARSHALLTOWN, IOWA

FISHER TRADE MARK

1015 SANTA FE AVENUE
LOS ANGELES, CALIF.



Announcing

a new improvement!

Diastafor takes a step forward! To insure further its utter perfection in treating white fabrics particularly, the color is now lighter. Thus, white goods can be sized and desized with Diastafor without the slightest danger of discoloration.

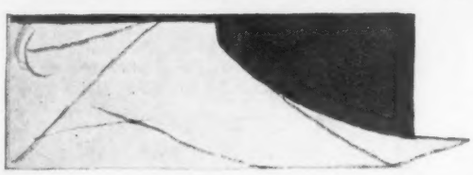
Textile manufacturers all over the country are giving their enthusiastic approval of this color improvement in Diastafor in preparing their white materials for bleaching.

Diastafor also insures a perfect dyeing job, stripping all starch content from fabrics without injuring the fibres. This agent never impairs the tensile strength and gives fabrics a wonderfully soft feel.

Diastafor requires no expensive machinery or change in plant set-up. Let our technical man advise you or write to

FLEISCHMANN'S

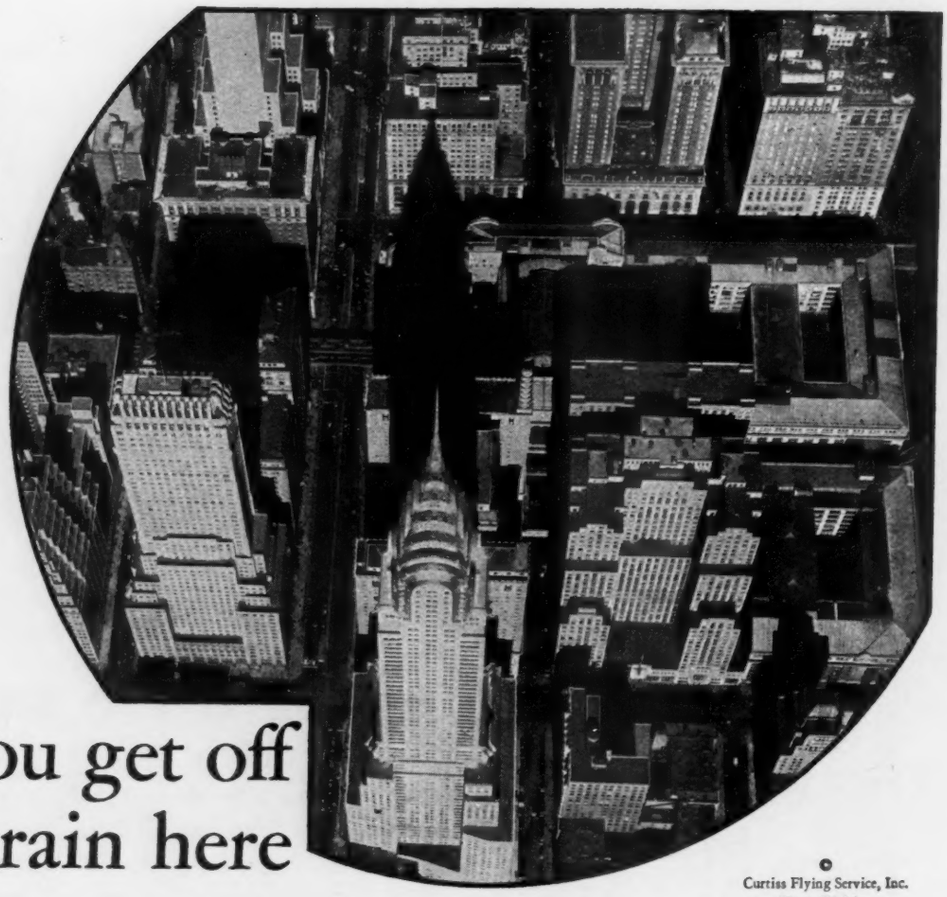
DIASTAFOR



Diastafor Department

Standard Brands Incorporated

595 Madison Avenue **New York City**



Unusual air view of the vicinity of The SHELTON, *the Grand Central District, showing Chrysler Bldg. in the foreground. Opposite the new Waldorf-Astoria.*

© Curtiss Flying Service, Inc. Photo Division

When you get off your train here

—you are but 5 minutes from *The* SHELTON, New York's most famous club hotel

Most popular among comfort-loving travelers. Where guests may enjoy an invigorating plunge in the beautiful Shelton Swimming Pool, at any hour and without charge. Where you find all the service that can be given by a metropolitan hotel of the first class—and an unusual club-like atmosphere that has endeared *The* SHELTON to travelers from every section of the world. You will like *The* SHELTON—it is different—and such a relief from the ordinary hotel.

Besides the swimming pool there is a gymnasium, completely equipped; game rooms for bridge, chess, billiards, bowling; roof garden; solarium; library and reading room; four beautiful lounges; yet room charges are no higher than in other hotels where the most you can expect is a "room and bath."

$2.50 to $3.50 for one
$4.00 and $4.50 for two
Suites, $5.50 and up.

The SHELTON

49th and Lexington Ave. New York

SUPERTEX penetrates

TRADE NAME REGISTERED AND PROCESS PATENTED

A print made with Supertex. Note the complete penetration of the printing, evident from a glance at the right and reverse sides of the cloth.

This new printing gum produces clear, deep prints in all fabrics.

SUPERTEX is a transparent and thoroughly cleaned printing gum used in conjunction with Hydrosulphite A.W.C. for white discharges. This gum is completely and easily soluble and contains no impurities.

Because of the complete solubility and absolute purity of Supertex, the Hydrosulphite is uniformly distributed throughout the discharge paste and carried right into the fibre. It is not merely deposited on the surface of the material. This thorough and uniform penetration of the discharge paste gives sharp outlines, even, clear whites and perfect discharge on both the right and reverse sides of the fabric.

After steaming, the decomposition products of the Hydrosulphite are readily removed by a light wash, leaving the goods soft and strong with a uniform and clear white discharge.

Supertex has no equal for penetration. Printers everywhere, working with all fibres, are obtaining results hitherto considered impossible.

We suggest an immediate comparison of Supertex with any product you now use—your own tests will convince you of the many fine and superior qualities of this new printing gum.

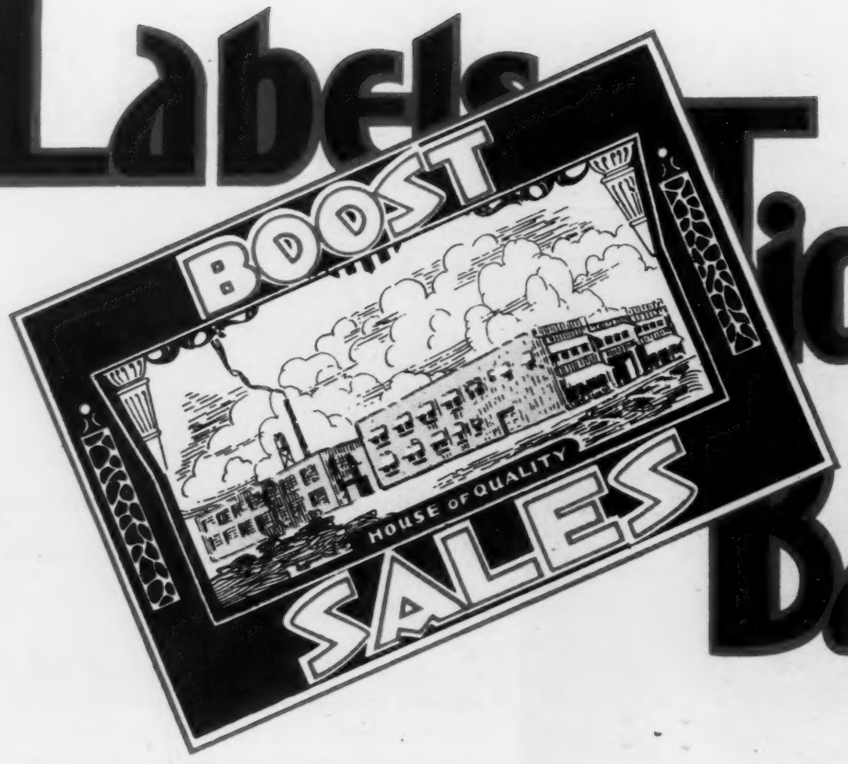
JACQUES WOLF & CO.

Manufacturing Chemists and Importers

PASSAIC, N. J.

WAREHOUSES: • PROVIDENCE, R. I. • PHILADELPHIA, PA. • UTICA, N. Y. • CHICAGO, ILL. • CHATTANOOGA, TENN. • GREENVILLE, S. C.

Labels Tickets Bands



BRANDED textile goods penetrate markets which others find difficult or impossible to enter. And once established they resist assaults of unbranded products and assure their makers steadier production with consequent larger profits.

An experience of many years coupled with mechanical facilities equaled by few other organizations in the country enables us to offer exceptional service to textile manufacturers and selling agencies in the design and production of labels, tickets, bands, hang tags and bolt ends.

This service includes both original design by artists thoroughly familiar with textile packing technique and faithful reproduction of designs already in use. Highest quality of workmanship goes hand in hand with charges which usually mean substantial savings to purchasers.

We shall find pleasure in submitting idea sketches for new designs and in quoting on any type of textile label or band---all without obligation.

JACOBS GRAPHIC ARTS COMPANY
DESIGNERS AND PRODUCERS OF TEXTILE PACKINGS
CLINTON___SOUTH CAROLINA

"Suppliers" to the Textile Industry

Native Javanese plantation workers.

A Stein Hall shipment arriving in New York from the Far East.

(Above) Factory at Long Island City, N. Y.
(Below) Laboratory, New York.

FOR over half a century we have been supplying the textile industry with quality materials for sizing, printing and finishing.

With Corn and Wheat Starches from America, Potato Starch from Maine and Holland, Tapioca Flour from Java and Sago from Borneo, we are in a position to supply the most exacting requirements. When a dextrine or gum is required, our factories at Chicago and Long Island City have this complete range of base materials from which to select.

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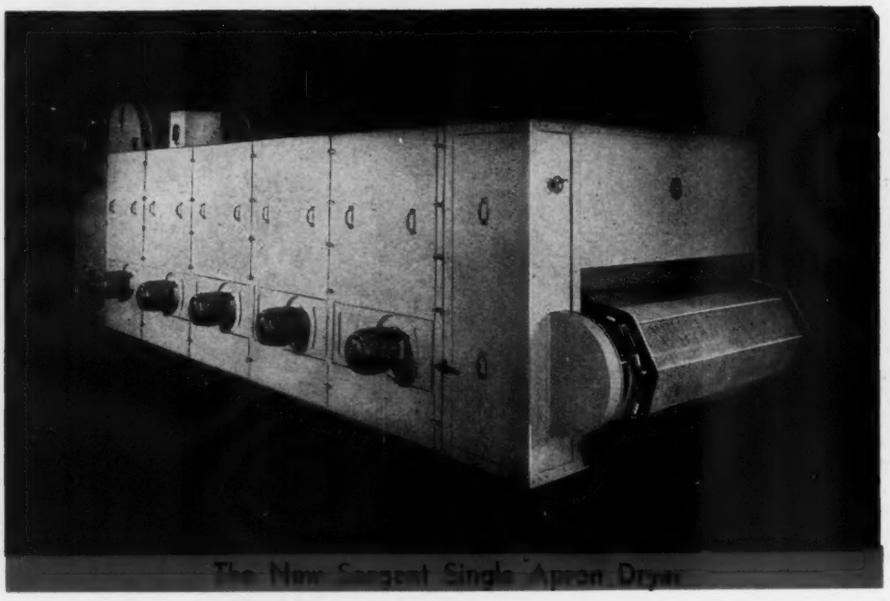

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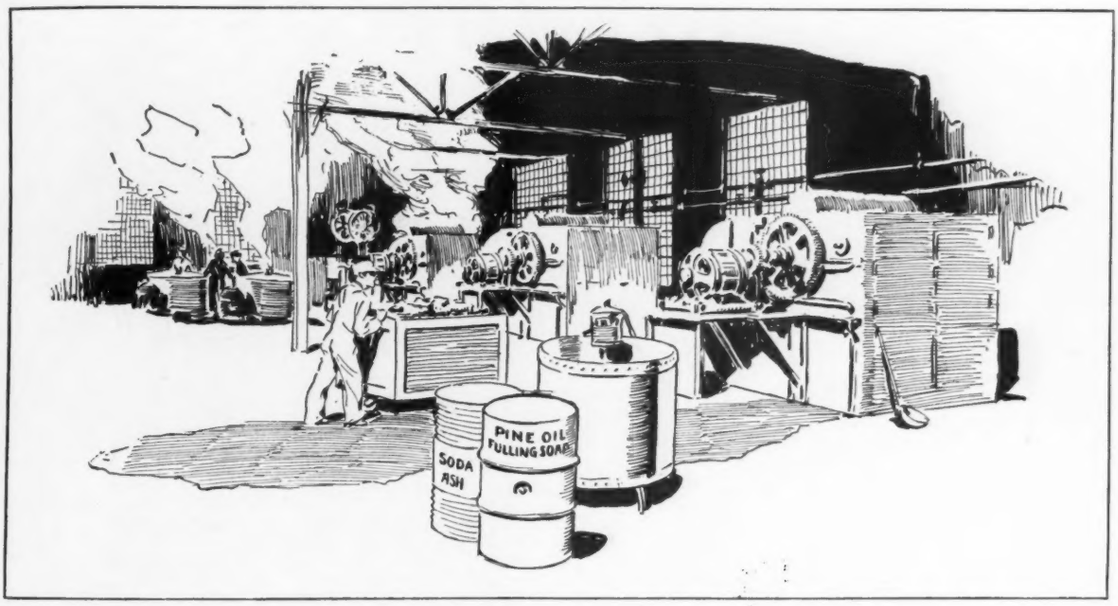

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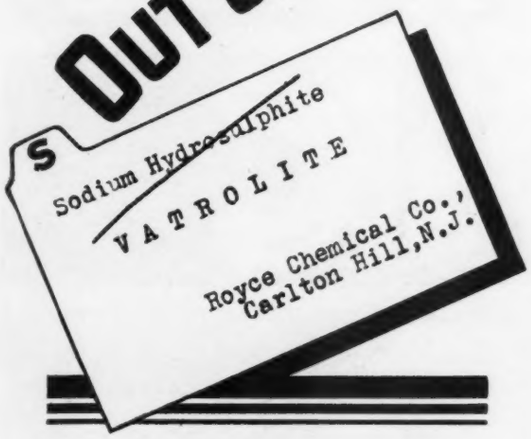

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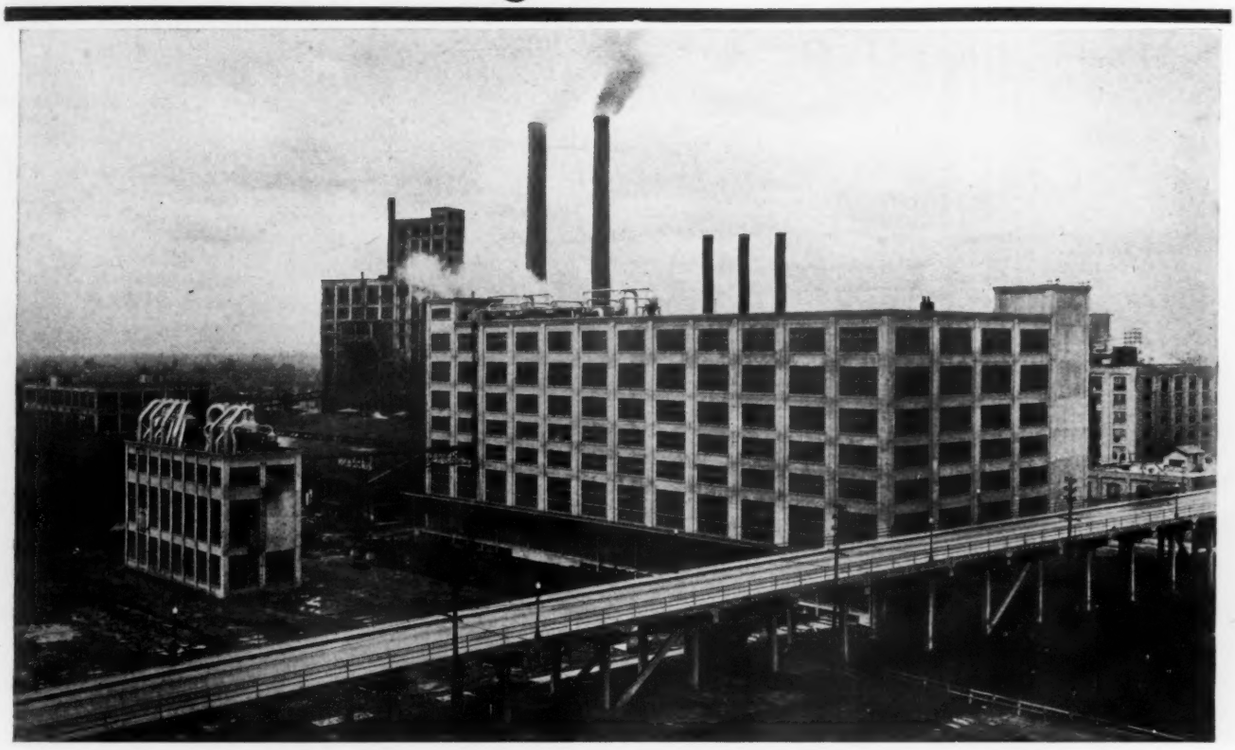

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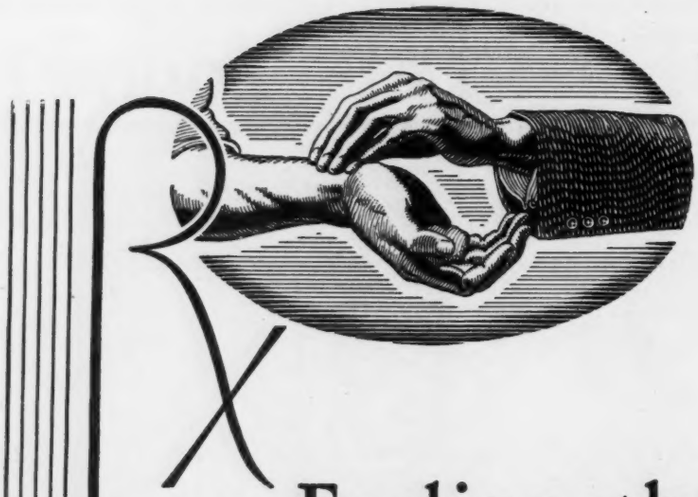

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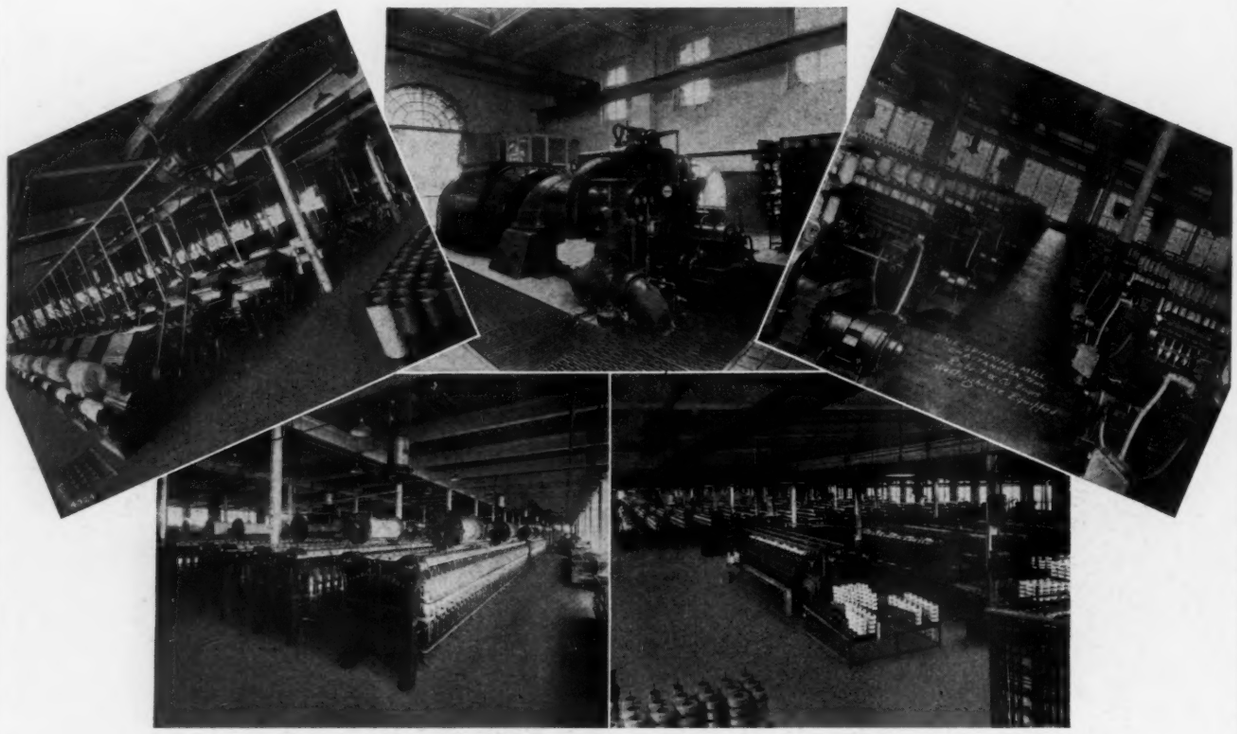

Every Department Producing a Profit

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Vol. 96 **COTTON** No. 10

October, 1932

W. R. C. SMITH, Publisher
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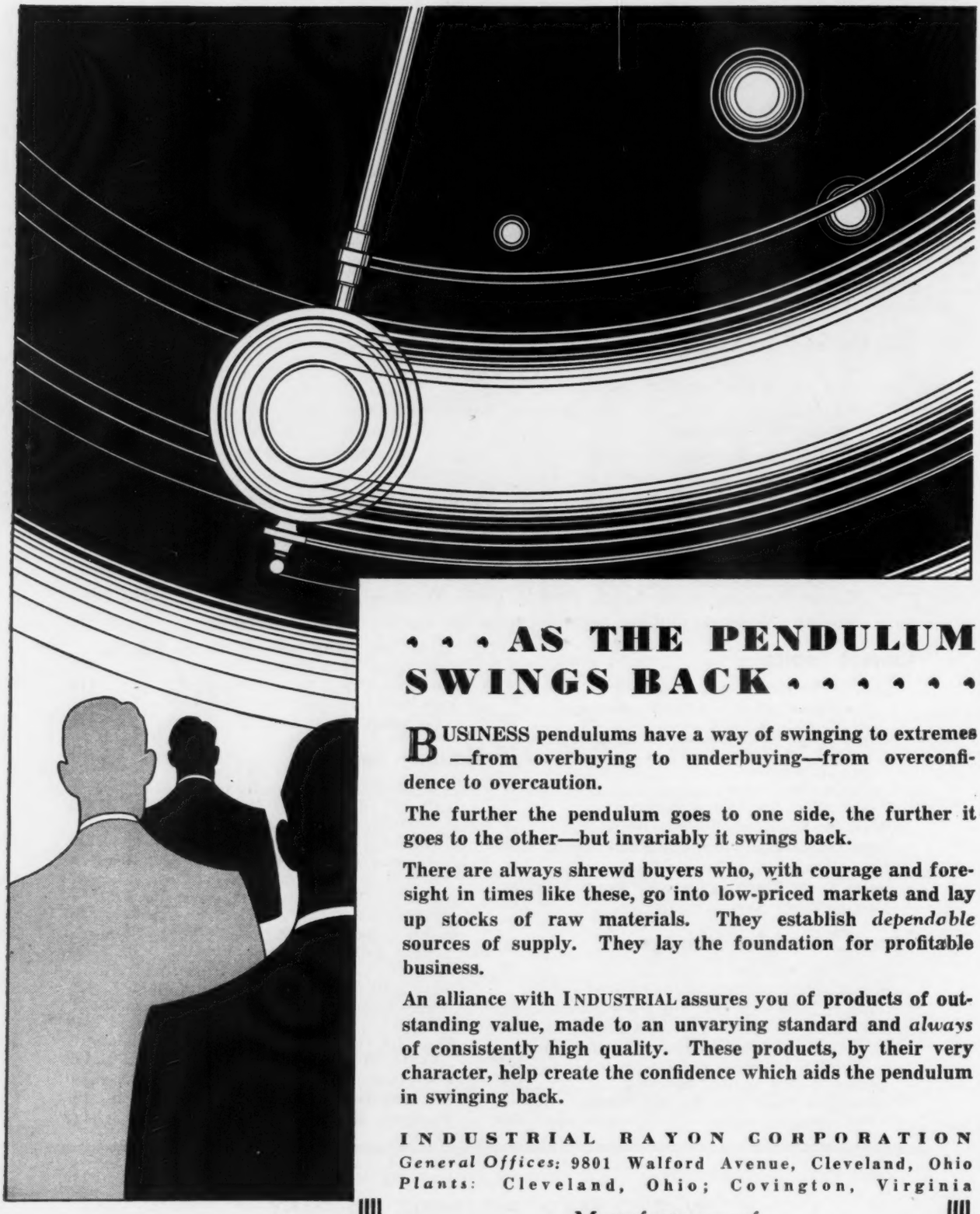

• • • AS THE PENDULUM SWINGS BACK • • • • • •

BUSINESS pendulums have a way of swinging to extremes —from overbuying to underbuying—from overconfidence to overcaution.

The further the pendulum goes to one side, the further it goes to the other—but invariably it swings back.

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Vol. 96
No. 10

COTTON

October,
1932

The Southern Textile Exposition

THE definite turn of conditions in the southern textile industry, coming first in the form of an increasing spirit of optimism which later expressed itself in better operating schedules, intensifies interest in the Tenth Southern Textile Exposition, to be held at Textile Hall, Greenville, S. C., during the week of October 17th to 22nd inclusive.

The Textile Show, each two years, represents the highlight of common interest among the mills of the South and the firms supplying machinery, equipment, supplies and services to the mills. It has come to be recognized as the chief meeting place of all factors allied with the industry; and as a means of providing, through the extensive and effective exhibits, a regular opportunity to the mill man for keeping up with the latest developments in equipment.

To the accepted advantages of the Exposition, circumstances add another value to this year's show which will undoubtedly increase the attendance of mill men and their interest in the equipment and materials displayed there. It is generally recognized that there will not be any immediate physical expansion in number of spindles, looms or plants; but a continuing competition and demand for lower production costs have forcibly emphasized the necessity for adequate replacement and modernization of equipment. As is aptly stated in Mr. Gossett's contribution to this issue, on page 48, "Those organizations which have put their houses in order and have geared up their equipment and manpower to meet the more stringent demands of keener competition and activity, will share in the profits in direct proportion."

The two years which have elapsed since the Ninth Exposition in 1930 have been utilized by practically every firm supplying the industry with equipment and materials for the purpose of refinement, improvement and new development in their respective lines — their exhibits at Greenville this month will display the results of their efforts. Engineers representing practically every group serving the industry will be present for consultation and conference on different textile problems.

So, coming at a time when the textile industry has already begun to lead its neighbors back up the hill, with an attitude of active interest among the mills in the newer, the more efficient, and a realization on their part of the imperative need of the more efficient—the Exposition will have added value, to exhibitor and mill man alike.

The Exposition company, headed by President William G. Sirrine, and Miss Bertha M. Green, secretary, have worked intensively in providing every factor contributing to a successful week. The two main floors of the Exposition building, the permanent annex, and a temporary annex will be used to house a large number of well-planned and diversified exhibits.

The exposition will be formally opened at 10:00 o'clock on Monday morning, October 17th, and will be in operation from 10:00 A. M. to 10:00 P. M. each day through Friday, October 21; and from 10:00 A. M. to 6:00 P. M., on Saturday, October 22nd, the closing day of the show.

Many social features are planned during Show Week. On the evening of opening day, October 17th, the Cotton-Textile Institute will show the new styles in autumn cotton dresses, demonstrated by twenty beautiful Greenville girls.

On Wednesday there will be a meeting of the Textile Section of the American Society of Mechanical Engineers. On Wednesday evening the Junior Charities will give a "Prosperity Ball" at the Poinsett Hotel for the benefit of the Maternity Shelter operated in the Parker School District of Greenville.

The semi-annual convention of the Southern Textile Association will be held at the Poinsett Hotel on Friday, October 21st, comprising a morning business session, a luncheon with distinguished speakers and guests and entertainment; and a dance complimentary to the members in the ballroom of the Poinsett Hotel.

Other unofficial and informal meetings are being planned.

TEXTILE HALL, GREENVILLE, S. C.
A complete guide to the exhibits at the Southern Textile Exposition appears on pages 58 to 63 of this issue of COTTON . . .

Mr. Gossett

We Must MODERNIZE

THE theme of this issue is Modernization. Here Mr. Gossett reviews briefly some of the broader phases of the subject, in terms of modernizing method, attitude and policy, as well as of equipment and personnel. The author is an outstanding southern cotton-textile manufacturer and merchandiser, whose progressive policies and broad vision are universally recognized. His statements apply with equal force to his own field and to the other branches of textiles . . . . . .

IN the existing most serious crisis in its history, the textile industry more than ever before faces the absolute and imperative need of modernization. While under present conditions it may seem to some as out of place to suggest it, the fact remains that *now* is the time when we must do our hardest thinking and most careful planning. An attitude of indifference, of "accepting the inevitable", of temporizing until the return of more prosperous times, may prove disastrous to the individual organization, and to the industry; for, just as surely as improved conditions arrive, the industry must have prepared itself for them. Those organizations which have put their houses in order and have geared up their equipment and man power to meet the more stringent demands of keener competition and activity, will share in the profits in direct proportion.

Decades of life and operation have taken toll in the efficiency of mill equipment, and to this is being constantly added the effect of improved design and machinery, thus rendering obsolete processes and methods as well as machinery previously considered efficient.

Years of operating along lines of merchandising now antiquated and belonging to a former day, have also in many ways destroyed the effectiveness of our selling and in the distribution of our products.

That there has too long been a widening gap between the activities of manufacturing and selling textile goods, is becoming more and more generally recognized; and no more important phase of modernization, in a broad sense, could be fostered and encouraged than the development of a closer and more intimate co-ordination between the manufacturing of textile products and their sale and distribution. Such a co-ordination must include a better understanding by the manufacturer of the finer points involved in merchandising, of consumer needs and desires, of their problems and of the possibilities of market development.

The man at the mill can contribute to serving the customer more effectively—and more often—through a clearer and more comprehensive knowledge of the uses to which his product is put, and the possibilities for additional developments for his equipment.

Closely related to this need, and of equally prime importance, is the necessity of providing the sales factor with a more intimate understanding of the mill's possibilities and an appreciation of its limitations and requirements.

The subject of modernization in detail should be discussed from the standpoint of the two major divisions of the industry—manufacturing and marketing—but it must also be considered from two other distinct elements; one is from the angle of the individual mill or mill organization, and the other, equally essential, is the thought of modernization for the industry as a whole made up of parts consisting of the individual units or groups. Let us consider the former angle first.

Manufacturers need to know more of the problems involved in the sale and distribution of textiles—

The most obvious approach to modernization, in considering the individual plant, is to consider the physical equipment. Modernization is in one respect the cumulative effect of a carefully planned and operated pro-

Our Manufacturing and Merchandising

--By--
B. B. Gossett
President, American Cotton Manufacturers Association;
President, Chadwick-Hoskins Co.;
Vice-Pres., Gossett Mills, Inc.

gram of maintenance of plant and equipment; but its other chief phase is renewal or replacement of the new to supersede the old and worn-out — the obsolete. Intelligent management demands the adoption of proven methods and machines which may be installed to replace those made obsolete by their development. The machine shops and others supplying equipment and materials to the industry have beyond doubt utilized the recent period of slackened demand to develop newer and better methods. This makes it imperative for the mill that is to survive and keep in the front rank to adopt those developments which are essential and which have demonstrated their ability to earn attractive returns.

Courtesy, Cannon Mills.

—and those in the selling end must learn more of the problems of manufacturing and production . . . .

Improved opening equipment, better and longer drafting, more efficient methods of warp preparation, higher speed looms, range finishing—these are some of the results of progress in textile machinery which must be carefully considered by the mill seeking to raise its efficiency. The "low-cost" mill of tomorrow will be the leader; and its low cost must come through intelligent management, no phase of which is more important than the selection and use of the most up-to-date equipment.

Aside from the physical equipment of the plant, modernization must also be effected in methods of operation. More intelligent and accurate cost accounting is now generally recognized as one of the great needs of the average mill organization. An understanding of the fundamental principles of operating a mill for profit, of knowing for each product manufactured the price at which a profit can be made, and of selling only when the price offered will net a profit—these are outstanding needs which must be a part of any program looking to complete modernization.

It is no unjust criticism of existing marketing facilities for textile products, and the personnel involved, to point out that in many ways—through tradition or because of a previous lack of necessity for change—we still cling to methods well-nigh antiquated. More efficiency, more interest, less waste and avoidance of duplication of effort are essential requirements in a modern merchandising program. Among other things, some plan should be adopted which will bring producer and buyer into closer contact in order that there may be a better understanding of their mutual problems.

Under the demands of present conditions and needs, any discussion of modernization in the textile industry must be broadened beyond the scope of the individual plant. Even an industry composed of modern units, producing fabrics and yarns at minimum cost, which does not function harmoniously and constructively on issues affecting the industry as a whole, is far from modernized. So it is with individual units. It makes no difference how modern or efficient a plant may be, the management which fails to contribute its full part in all co-operative efforts for the good of the entire industry, is seriously lacking in soundness and vision. In short, it is not a modern unit in the true sense of the word.

Turning again to the subject of new and modern equipment, the southern branch of the industry is afforded a splendid opportunity to keep abreast of the times through the Southern Textile Expositions which are held every two years in Greenville, South Carolina. The Tenth Exposition will be held during the week of October 17th to 22nd of this year. It will represent a comprehensive cross-section of what is the last word in textile machinery. No mill executive can afford to miss it. Neither can he afford to have his key men miss it. The fact that a mill is not in position to purchase new equipment at the moment is not a sufficient reason for passing up the show. Only by a careful inspection of the various exhibits can one become properly acquainted with the latest available developments in machinery and supplies. It is bad enough not to keep one's plant up-to-date. It is worse to be ignorant of the trend of the times.

Meeting the New Competition

By Norman E. Elsas

» »

THE subject of modernization of equipment, from the standpoint of financial return, is emphasized in this discussion by Mr. Elsas. The author gives specific instances of returns possible through the establishment of up-to-date methods and the installation of efficient machinery . . .

» »

THE textile industry began suffering from unsatisfactory margins on its products long before the stock market break, and before a general recession in business was in evidence over the country as a whole. It seems that the fortunes of the textile industry follow more closely the price trend of cotton than economists would expect. When the long decline started in the cotton market, orders for textile products began to fall off. Then the attempts at price stabilization by the Federal Farm Board further hampered any possibility of selling manufactured products, and buying the cotton, without an enormous loss. Nearly everyone will recollect the unnatural and unwarranted premium of the May option on the future market during the season 1929-1930.

Efforts by the Cotton-Textile Institute to bring about a reasonable control of production by curtailment, the elimination of night work, etc.—to hold production more in line with demand—have met with surprising success when viewed in the light of previous textile manufacturing practices in the face of declining markets.

It seems that the long decline in the price of cotton has been definitely checked, and that some upturn has been accomplished. While further advances might further stimulate buying, it does seem there is assurance there will be no further major decline in the price of cotton below market quotations during June 1932, which is all that is necessary to help a majority of the textile mills reach a point of stabilized operation.

The absence of further declines in the markets eliminates the type of competition that is encountered from the manufacturer operating "on a shoe string". On declining markets there is no urgency for a strong financial position. A manufacturer can go out and get an order at something under the market, return and get ready to produce, and then purchase the raw material at a spread that will show a margin in spite of the order having been accepted at less than the market. This method of doing business is demoralizing to any industry. On stabilized, or advancing markets, this method of operation is not possible. A manufacturer dares not sell below replacement costs for his raw materials, plus a margin, whether he has or has not a stock of such materials on hand. Such a condition makes for a firm type of competition which, while keen, is at least less speculative.

"Shoe String" Competition Eliminated.

It seems that we are entering a cycle of stabilized, or slightly advancing prices, for most commodities, and particularly for cotton. With this condition existing, the ruinous type of "shoe string" competition referred to, is automatically eliminated, and good manufacturers can go about meeting competition with some assurance that they will obtain a margin commensurate with their ability to produce and market their products.

In this economic effort, the manufacturer who is best equipped in personnel, organization, and tools for manufacturing, will set the pace for the industry. While it is true that the best equipped manufacturer will try for the maximum margin obtainable, he will also endeavor to keep his production to capacity. This in turn keeps his costs down, and narrows the margin for other producers in competition with him.

Boom times which would require the running of all of this country's spindles full time in order to satisfy the demand, are not yet with us, nor are likely to be in the immediate future. While these slack times are still here, the progressive manufacturer must prepare to meet competition, which is not solely dependent on guessing the market trend.

"WOULD it not be better for mills that now have cash, or that have the credit to borrow at the low interest rates now available, to invest money in equipment which will enable them to compete in the coming years, and at prices that will show a considerable spread between the values at which they are now available and those at which they will be in the future when some inflation has taken place?"

Certainly an efficient manufacturing personnel is the first requisite; *but* such an organization should have the best equipment available.

It is difficult for a manufacturer, when he sees a spinning frame producing yarn, day in and day out, with a break above the recognized standards, to say that he can afford to junk this frame. Yet, there are thousands of spindles now in operation on frames with too small a gauge, so that the size of the rings is so limited that the pounds produced per spindle per hour are restricted. This results in not only high spinning costs, but also high weave room costs. In the spinning department there are many possibilities in the way of modernization, such as long-draft, tape-drives, etc.

One of the succeeding operations—that of warp

By PREPAREDNESS

Secretary, Fulton Bag and
Cotton Mills, Atlanta, Ga.

Mr. Elsas, one of the leading executives of the South, is this year president of the Cotton Manufacturers Association of Georgia . .

preparation—has already received concentrated attention; in some cases automatic spooling shows the best results, in others high speed winding and cone warping would show to better advantage—at any rate, the old-fashioned, slow speed spooling is generally obsolete.

Considering next the weave room, there is no question but that looms will stand just so many years of service, and just so much overhauling, before they reach the point where upkeep runs almost as much per year as 25 per cent of the cost of a new loom. It is self-evident that in such cases the purchase of new looms and the junking of old ones is a necessity if the manufacturer is to meet the competition of others having modern equipment. On ancient or worn-out looms, the number of defects in the cloth, the stoppages, etc., are bound to be excessive. The number of looms that can be efficiently handled by a weaver is limited by the number of broken ends that must be repaired per unit of time. By seeing that yarn comes to the loom in prime condition with defects eliminated, and then having modern looms running at proper speeds, it is surprising the saving in cost that can be obtained.

An Example of Weave Room Saving.

Just as a short example of this: Let us assume that a weaver is earning $20.00 per week on 20 looms, producing 250 yards per loom per week. The direct labor of weaving would amount to 40 points per yard. Let us assume now that everything has been properly set up so that this weaver could run 80 looms with the assistance of a battery hand that would cost $15.00 per week for the whole job; the direct labor cost for running these 80 looms would now be $20.00 plus $15.00, or $35.00 per week, and the cost per loom per week, instead of being $1.00, would be just slightly over 40 cents, bringing the direct weaving cost per yard down to about 10 points.

Lack of Balance Between Departments.

Active manufacturers have been accomplishing just these savings by equipping their plants with modern machinery and introducing careful and effective management. It should also be borne in mind that the example given of reduction in weaving cost can be easily accomplished with a real decrease in the physical effort of the weaver; in fact, the percentage of idle time when no active effort is required can be increased considerably. In other words, a skilled weaver can run 80 looms with far less effort, when everything is in proper condition, than the same weaver would have to exert to run 20 looms using poorer yarn and with the looms in questionable repair.

There is another condition in the southern mills that is almost universal, and that is the lack of balance between the number of machines necessary in the various departments. In the establishing of the southern mills, the original allocation of machinery between processes was set up for the manufacture of coarse yarns. In fact, it was generally believed that southern mills could manufacture only coarse yarns satisfactorily, and were not equipped either with machinery or operatives with sufficient skill to produce fine yarns.

As a result of this condition, a great many mills in the South still have entirely too few cards for the number of pounds they are now putting through, because improved efficiency in manufacturing has demanded greater production from the carding department. In addition, the efficient manufacture of fine yarns requires a much lower production per card per hour than is necessary for coarse yarns because of the nature of the work.

Demands upon the card room have brought about a further differential between the various drafting operations, which has necessitated a drifting away from what is considered the best practice. It is not unusual to find front roll drawing speeds 50 per cent faster than research has indicated gives the best results as to both strength and quality. The demand on all drawing and carding is frequently a great deal more drastic than would have been dared some years ago.

Machines Should Not Be Overloaded.

This loading beyond capacity can be proven by research to be uneconomic, showing that the mills permitting such conditions to exist are not operating on the lowest production costs. Excessive speeds and drafts result in decreased quality, decreased strength, and—equally as bad—an increase in waste, both visible and invisible.

We are now at a point in the economic cycle where many will buy machinery and other appurtenances at far below any expectation of the last ten or fifteen years. This means that gold is high in price. Inflation means the cheapening of gold, or the necessity for furnishing more gold to buy the same unit of material value. Almost every force in this country and abroad is now striving toward an inflation, which cannot help but increase the price of commodities relative

to gold, and, parallel with this, increase the price of machinery and equipment.

Would it not be better for mills that now have cash, or that have the credit to borrow at the low interest rates now available, to invest money in equipment which will enable them to compete in the coming years, and at prices that will show a considerable spread between the values at which they are now available and those at which they will be in the future when some inflation has taken place?

Expressed in another way: $1,000 invested in a card definitely sets the price for that piece of equipment, which is useful over a long period of years. The same $1,000 might have purchased forty bales of cotton. Some years from now cotton might be selling at 20 cents per pound, and the $1,000 invested in the forty bales of cotton would then be the equivalent of $4,000. The $1,000 invested in a card might well be worth $1,200 to $1,500 in a few years on the value of the card alone, aside from the increased earning value that might be obtained through the use of this machine over the intervening years.

Automatic spoolers (above) and high speed cone winders (below) in conjunction with high speed warping (see page 55) have made slow speed spoolers and warpers obsolete . . . . . .

The same principle is applicable to all types of textile equipment, and it seems that the times urge upon progressive manufacturers the necessity for bringing their complete establishments up to such a modern state that cotton can be converted into the final product at the lowest possible cost, with the least possible labor, and meet competition, from whatever source it might come.

"The Principles of Safety"

The proper placement of industrial employees was one of the many points emphasized at the recent meeting of the Textile Section at the Annual Safety Congress by Marion W. Heiss, employment manager, Proximity Manufacturing Co., Greensboro, N. C. in his analysis of "The Principles of Safety".

He said in part: "Today the world is filled with giant industries. Marvelous machinery and equipment, the fruit of the mental and material efforts of men, are being operated by thousands of men and women. Fast moving parts, automatic features and intricate operations characterize this equipment. Danger lurks constantly. The natural instinct of self-preservation is not enough. Safety challenges us not to be destroyed by our own creations.

"Accident prevention study goes deep into the nature and ideals of man. It effects the physical, mental and spiritual being and we must not permit this adjunct to our industrial life to fall behind.

"Industrial accidents may be divided into three groups: (1) Those due to the physical conditions found in the working place, such as unguarded moving parts, insufficient lights, defective equipment, etc. (2) Those due to certain physical or mental conditions found in the working force; which includes physical and mental misfits for specific work, carelessness, indifference, horse-play, etc. (3) Those due to disaster as fires, explosions and the like.

"We must make our employees safety-minded. We must instill in them the desire to eliminate accidents, thus protecting themselves and their fellow employees. Nature has endowed all mankind with the instinctive self-preservation but we must elaborate upon that instinct. We must make the men and women in industry realize that they must continuously combat accidents in order to preserve themselves. We must make them conscious of the accident hazards lurking like a tiger in ambush, ever ready to spring forth and claim its prey. They must be taught to guard constantly against their common enemy.

"Unless the foreman and other operating executives in our industries are real believers in safety and take an active part in accident prevention work the cause of safety hasn't a chance. They must use their every energy helping to develop the proper accident prevention spirit in those under them. They must realize that they can't pour safety ideas into the heads of men and women; they must lead them to think in terms of safety."

MODERN METHODS and EQUIPMENT

By Lawton P. Duncan
Supt., Inman Mills,
Gen. Supt., Riverdale Mills

THIS is a high-light review of the improvements that have been made, from ginning through opening, picking, carding, spinning, warp preparation, slashing, and weaving, to the cloth room. Mr. Duncan comments on the various developments that have been made in these departments, and discusses means whereby each can be utilized toward the end of greater efficiency, lower cost, or better quality . . . . .

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VOLUMES have been written about different phases of textile manufacturing, and only then the subjects were partially covered; therefore, to attempt to treat such a subject as modernization at all intelligently we must at best hit the high spots and even then treat them only in a general way.

Probably there is no industry in the world that has seen such improvements as has the textile industry, and certainly there can be no question that very great strides have been made in all industries, especially during these past few lean years. These great improvements have come through the united efforts of machine makers, supply manufacturers, and those of us that have had to "hold the bag", so to speak. We have all been working together toward one end. We have found ourselves confronted with the problem of earning something for the vast amount of capital invested in our great industry, and we have certainly not found this an easy job. Competition of the keenest kind has left those who would not modernize out of the picture.

To begin the real subject without further qualification would not be just to those who contributed to this great progress. Since we cannot attempt to go into detail and discuss certain machines, appliances, or methods, except as they have to do with modernization, we must try to touch those things that have done the most for our industry. Certainly should I attempt to write my own ideas of some of these, the grounds for argument and justification for denial would be so great as to render this article worthless, but probably by grouping and calling attention to some of these, we may get some real good from it.

◆

We might begin with the cotton gin, upon which we must depend for the staple that starts all the trouble. Our modern gins not only separate the lint from the seed, but do a great amount of cleaning that the old type gins were not equipped to do. They have in reality become a part of our manufacturing equipment in that they clean out so much of the heavy trash, dirt, parts of bolls and other foreign matter that was formerly left to our cleaning machines in the mill.

From there, we naturally jump to the opener room, where improved methods and machines enable us to produce a finer product from the same grades of cotton than was formerly thought possible. A good many years ago the standard opener room equipment was one old "hopper" or feeder used as a bale breaker, being fed from a very few bales of cotton. Sometimes the feeding was done from only one bale at a time. These few bales were not opened until ready to begin feeding from them, and no attention was paid to the different grades of cotton that must be used. Today it is the rule rather than the exception to find large opener rooms filled with a great many bales opened as far ahead of time as possible in order that the staple might straighten out more or less and loosen up so that it will be easier cleaned. The arrangement of these bales according to grade and the method of feeding small amounts from each is carefully watched so that a perfect blending of grades and character is obtained.

Great batteries of machines designed to treat the cotton in different ways have replaced the old bale breaker. A great deal of heavy waste is cleaned from

the cotton by these machines and we find cleaner, better opened, and more uniform cotton being delivered to the pickers.

One modern machinery layout might be described as follows: a bale breaker with a 12-foot to 16-foot apron, upon which a still further blending of the different bales is obtained, feeding into a vertical opener which carries the cotton into an upstroke cleaner and then into a horizontal cleaner. Each of these machines treats the cotton in such a way as to take out waste of a different character.

The cotton then may be conveyed to pickers through cleaning trunks which take out more waste. The result of this combined modernization has given us the first step, which means so much in the final outcome.

There was a time when it was thought that cotton must be put through two or three pickers before it was ready for the card. Single process pickers have certainly arrived and give up a cleaner, more uniform lap than was ever possible before. We have come to depend a great deal on these machines for uniformity of our finished yarns. In addition to giving us a cleaner, more uniform lap, there was a great saving in labor, power and floor space. Some manufacturers have gone still further and have automatic doffers on these single process pickers to save more labor and increase the production by the elimination of stoppage. The power saving has been increased further by the incorporation in these machines of ball bearings wherever they could be used.

Cards have remained very much the same since the evolution of the top flat card from the old stationary flats, but on these machines in very recent years we have seen added such improvements that have made their operation easier and resulted in an improved product. Outstanding among these, I think, is the continuous stripper, which saves labor, and waste, and insures a more uniform sliver. Certain changes in the design of clothing have attracted attention. Throughout the card room, on drawing and roving frames, there has been a continual improvement in the mechanical design of the machinery and parts that leaves little to be desired. Through a unique roll ararngement, efforts are being made to equip roving frames for longer drafts. Something is sure to come from this in the near future.

Mr. Duncan.

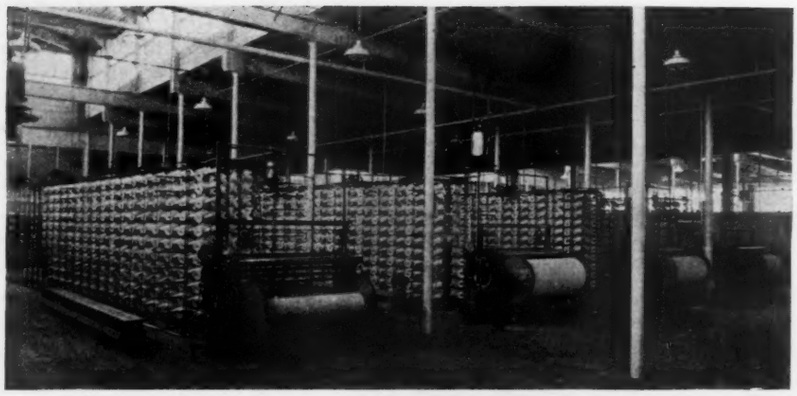
A great many mills have some modern spinning frames in the plant alongside of some of a much older vintage, and one has only to see this difference to realize at once what tremendous progress has been made here. Just the past few years, since the advent of "long draft", give us enough ground for comparison to show how truly our industry has progressed at this point. These new frames have been built to produce more and better yarn at a smaller cost. Some of the features of the modern spinning frame, which make the older ones look antiquated, are as follows. They are heavier and stronger, which allows greater speed with less vibration. Wider gauges and larger rings are used than formerly would have been thought practical. The changes enable us to make larger packages which in turn make fewer knots and less labor in the warp preparation process. We find also greatly improved rings, ball bearing spindles, and cylinders, spiral or generated gears and metallic thread boards. There are several types of long draft arrangements generally in use which differ in design but are built to enable the mills to spin yarn from heavier roving. In some instances drafts have been doubled and one process of roving entirely eliminated, thereby reducing cost and in a great many cases liberating badly needed floor space. At the same time yarns spun with long draft equipment have been found to be more uniform and stronger. These improvements along with others have made wonderful changes in yarn making.

For those of us not fortunate enough to have automatic spooling or high speed winding and warping, the hand knotter, which ties a weaver's knot, has proven a great benefit. Tension devices for spooling yarn from filling wind with less tension have improved the yarn and lead the way to faster spinning speeds.

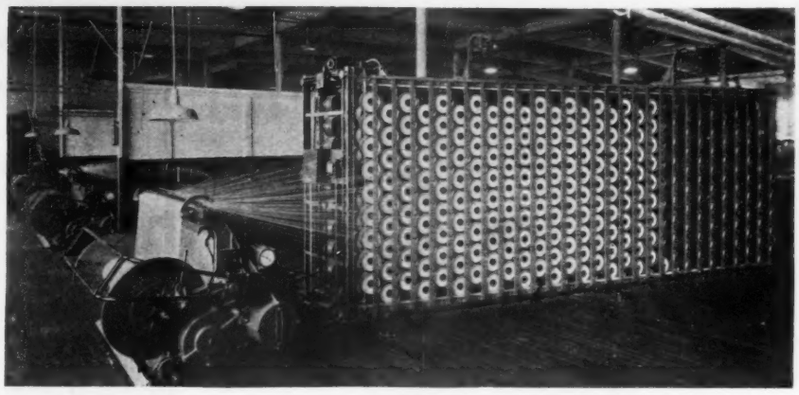
Automatic spoolers, high speed winding and high speed warping, have given the mills the greatest forward step yet mentioned. Knots tied by the automatic spooler are as nearly perfect as the union of two threads can be. Very little strength or elasticity is lost with these modern machines because the yarn passes through under so little tension. In most cases the installation of these machines will show a reduction in labor cost that in a few years will pay for them. By producing a stronger, more elastic yarn than is possible with the old style spooling and warping, and with knots far more perfect than those tied by hand knotters, loom productions have been greatly increased. Certainly in our continuous fight for higher efficiency, better quality and lower cost, these modern machines hold a very high place. A great deal of floor space is saved and handling is reduced to a minimum.

From this very important process we next come to the slashers, which for a long time were considered a necessary evil and simply another process through which the yarn must pass. Due to the demands for better weaving yarns brought about by the introduction of the high speed automatic loom, the slashing process has been developed to such a point that it is no longer considered "just another process". With modern equipment and methods, we have come to depend on slashing to help cover up some of the errors in yarn making. Today, we find slashers equipped with ball bearings practically complete from creel stands to take-up rolls.

Yarns stretched when wet and dried in this state after sizing can never regain the lost elasticity. This stretching has been reduced a great deal by ball bearings. We have also learned that in order to get the



High speed warping from magazine cone creels (left) and from cheeses (below) constitute one of the major developments in mill processes. These machines take supply packages from winders and automatic spoolers (see page 52) . . . . . .



best weaving results from yarns they must not be over dried or left too wet, but a normal amount of moisture—about 7 to 8 per cent—must be left in at the slasher.

The art of size making has been brought into the lime light and a great deal of thought and time has been given to the study of it. Temperature controls are now used on cylinders, in size vats and time regulating cooking controls on cooking kettles. It is very important that size be uniformly cooked and this can now be accomplished without a doubt by time-regulating controls. Uniformity of moisture left in yarns is governed by the temperature controls on cylinders. These temperatures are recorded on charts by recording thermometers giving a permanent record of just what the conditions were during each hour the slashers were operated. From long and tedious tests with the aid of these modern appliances we get better, more uniform warps that in turn produce better cloth more efficiently.

Tying-in machines running at a speed of 250 knots per minute very quickly and efficiently have warps ready for the looms. These machines and the warp drawing machines have saved the mills vast amounts of money and have practically eliminated a great deal of tedious labor. Without them, our present-day efficiency would be impossible.

To attempt to discuss the advantages of the modern high speed automatic loom and compare it with the old style plain loom would require a great deal of space. Today cloth is made faster, better and cheaper through the use of these modern machines. Every device that could be desired to accomplish these results has been incorporated. Manufacturers of these looms have improved them at almost every point during the past few years and have at the same time simplified them a great deal. Certainly the modern high speed loom with a notable increase in pickage, and refinements, speaks for itself.

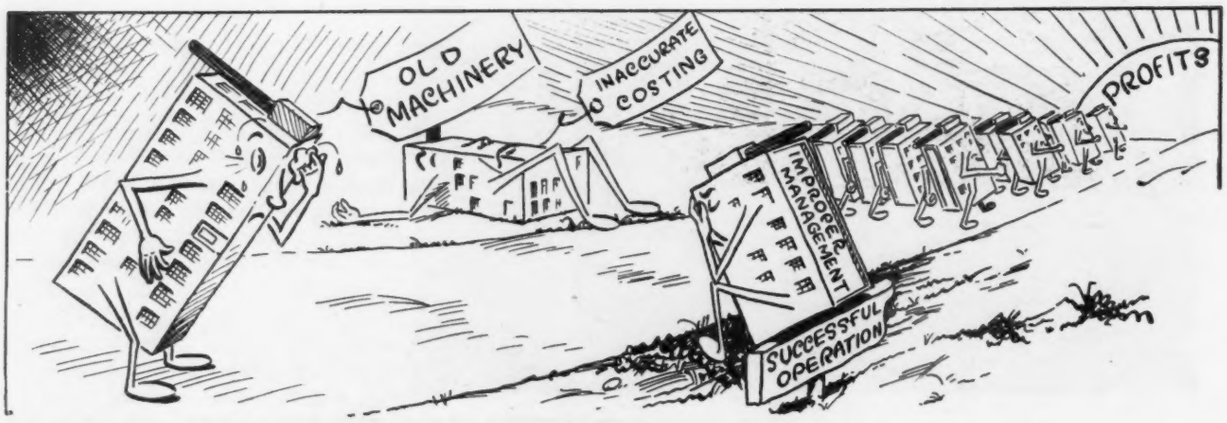
A comparatively recent addition to the cloth room machinery is the shearing machine. The cloth is run through this machine, which cuts off all the hanging threads and selvage filling tails, leaving the cloth clean and free from these defects. Part of this work was formerly done by hand, but as is the case with most modern machinery it is done much better and more efficiently.

To close this article without mentioning the service rendered to the mills by the machine, appliance and equipment manufacturers would not be fair. Certainly the co-operative relationship that exists has gone far toward perfecting machines to the high state of development that has been reached. The services of these experts in their respective lines has been of great value to the mills. They have always been ready and willing to help work out difficult problems so often confronted by the mills.

We might go on and on telling about one improvement after another and calling attention to the virtue of each, without ever finding a good place to stop. In a few weeks a great many of us will meet at the Southern Textile Exposition, each seeking out ideas and facts that we can carry back to these modern mills that will make them still more modern—and so progress is made.

Come to See Us: Booth No. 408.

EXHIBITORS and visitors at the Southern Textile Exposition are cordially invited to visit COTTON'S booth, No. 408, in the steel annex at the front entrance to the annex from the main building. Representatives of the business, editorial and subscription departments will be on hand throughout the week . . . . . .



Keep Up with the Procession; or Get Ahead of It

A Sermon on Modernization

By Dunhill Marsden

WHEN an army is on the march, the stragglers—the physically unfit who can't stand the strain—generally fall by the wayside and perish. It is the fit, well trained, well equipped soldier who stays in the line of march and fights and wins battles.

When industry is on the march—marching on to greater heights of efficiency, of performance, of production and of economy—the laggards who have not kept their plants and organizations fit, well equipped, and ready to meet the conditions of modern business warfare will fall by the wayside and perish likewise.

Every industry generally passes through three fairly distinct stages; the infant stage, the development stage, and the refinement stage. In the infant stage, some revolutionary idea makes even the crudest equipment which employs it superior to the best that was known before. Consider the first power spinning frames and carding engines; crude, clumsy machines, yet they multiplied the productivity of a man's labor incredibly.

In the development stage the original idea is expanded upon, and the mechanical expression of the idea is improved in design and operation. The new idea comes into such general use that it supplants entirely the older and less efficient methods and creates such a demand for the new machinery that its manufacturers virtually standardize on certain basic principles and proceed to control the new industry through virtue of being in on the ground floor when the period of expansion began. The end of the development period generally finds a relatively few manufacturers in almost complete control of the industry, and quite unwilling to alter any of the established methods that have made them successful.

The refinement period is reached when trade saturation through overproduction has increased competition and reduced profits. No industry will progress much if it is uninterruptedly profitable. There is no incentive to change methods that yield huge profits. But increased competitive pressure stimulates the demand for lower costs, and these can only be had by either cheaper labor or more efficient methods.

The textile industry is old. It long since passed into the refinement stage. There have been few basic inventions in textiles in fifty years. There have been many refinements. The power loom was a basic invention; the automatic loom a refinement. The power loom revolutionized the art of weaving; the automatic loom reduced its cost. The mule was a basic invention, and so was the ring frame which has so largely supplanted the mule; long-draft spinning and a host of other improvements have been refinements. There will probably be few future basic inventions in the art of making cloth, but there will be countless refinements that will make older methods obsolete.

The textile industry has reached a point where competitive pressure has erased almost any possibility of profit for a plant that does not operate at top-notch efficiency. Many inefficient concerns have already gone under; others must certainly go. Most of those that survive will be the ones that had the best equipment and most capable management, and neither is any good without the other.

You can't fight a good battle with a rabble of green, untrained troops; no matter how willing and brave and well equipped they are; yet an army of veterans is helpless if armed with flintlocks in the face of a well equipped foe. You can't fight a good industrial battle with poor help and poor management, nor can the best help and smartest management go far for long with worn out, obsolete equipment.

Success generally lies in *keeping* fit; not in *getting* fit. In keeping up with the procession; not in catching up with it. Catching up after you have once fall-

en out of line generally requires more effort than most of us can make, and we stay out. When mill managers and treasurers let their plants get too much out of date it may cost more than the plant is then worth to get it back in the running.

A mill treasurer recently remarked to a friend that he had made some money the past quarter, and was feeling pretty good about it. The friend agreed that he ought to feel good, and asked if the profit had been made after depreciation had been charged off. The treasurer remarked, "Depreciation, my eye! How could you depreciate this plant? It isn't worth anything now." How many plants like that are probably operating now? How long can they keep it up? And when they fall by the wayside, who will be best fitted to absorb the custom they will release?

Keeping fit is not just a matter of buying a lot of fresh machinery when anything new comes out. It is just as much a matter of keeping what you now have at its highest pitch of efficiency; then, when it can no longer profitably produce in competition with better methods, junk it. An athlete who burns up his energy too fast, or who neglects his health, must soon retire from competition, while the one who does not overdo, and who guards his health and keeps in condition can show the way for the younger generation for years. Many an old plant can show the way for newer ones that have been poorly cared for, but the time will come when the old plant must retire if it has stayed old, and give way to younger and fitter equipment.

When an athlete gets out of condition for any length of time he is as good as licked before he starts. "They never come back" is almost an axiom. If you have to "modernize" a mill you might as well throw it away and build another one in a fresh place. Keep it modern! If some of the machinery is old, perhaps it can be altered to meet modern requirements. If so, alter it. If not, and it can't compete with the new, get rid of it.

Modernization is not so much a matter of doing something, as of keeping it done. It is a matter of keeping up with the procession, or a little ahead of it. Do that, and you will not have to worry about competition for any great length of time, though there are periods like the present when conditions are topsy turvy for a while, and prices are not made by legitimate competitive rules. When this period is over, the profits go to the man who has kept himself in the best condition to go after the business when there is any business to go after.

Report on "Red Cross Cotton"

UP to September 17, the American Red Cross had contracted to exchange 51,239 bales of Farm Board cotton, voted by Congress to make clothing for the needy, for 20,005,598 yards of cotton cloth, James L. Fieser, vice chairman, said in the first detailed report of the cotton distribution operation.

Congress voted 500,000 bales of cotton to the Red Cross.

Mr. Fieser said that 1,348 Red Cross chapters, representing one-third of the country, had through September 15 requested 20,647,363 yards of cotton cloth.

Cloth has been shipped to chapters in every state, excepting Delaware.

Detailed statistics, available to September 9, show that 1,086 chapters requesting cloth listed 1,679,612 families who would be given clothing.

Figures of that date also show cloth in the following varieties approved on chapter requests:

	Yards
Cotton prints	3,814,575
Cotton flannel	3,808,240
Shirting	2,958,633
Gingham	2,452,152
Muslin	2,396,484
Birdseye	846,883

"More than a hundred thousand women have volunteered in our chapters to make this cloth into garments for people in need of clothing," Mr. Fieser said. "We have received reports from our chapters that their first work was upon clothing for school children, and shirts for men and boys.

"In hundreds of communities the cloth is being made up in central workrooms according to new style patterns recommended by the Red Cross here. In other towns and counties where women have sewing machines and are used to making their clothing, the cloth is given to them. In many towns where funds from other organizations are available for work relief, the wives of unemployed are receiving pay for their work as seamstresses.

"As in the flour distribution, however, chapters have been warned that the cloth or clothing must not be exchanged for work. It must be given absolutely free, and solely upon the basis of need. No other consideration must enter into its distribution.

"Our plan of distribution is that cloth will be sent to every chapter in the United States where the chapter officials say there is need for it. We hope millions of garments can be made immediately. After we have filled their first requests for shipments of cloth, we propose to ask chapters their needs for a limited variety of ready-to-wear cotton garments, such as overalls, trousers, underwear, stockings and sox.

"The raw cotton will go much farther toward purchasing quantities of cloth than it will in exchange for these ready-to-wear items. Need for clothing is so acute, if we are to judge by the fact that less than one-third of our chapters list 7,500,000 people who are in immediate need of this cotton clothing, that we have adopted every safe-guard to obtain the maximum in yardage of clothing that the 500,000 bales of raw cotton can be made to produce.

"Through enlisting women volunteers, the cost of manufacture can be saved on many items, and also cost of the findings, such as buttons, thread, etc. The costs of processing the raw cotton into cloth and its transportation, and similar items of expense, will have to be met in payments of raw cotton, just as in the wheat distribution, when wheat met similar costs of conversion into flour."

Guide to Exhibitors and Representatives at Southern Textile Exposition

IN this section will be found a complete list of the exhibitors at the Tenth Southern Textile Exposition in Greenville, showing the address of the company, the booth number, the names of each representative and the hotel or other address at which he is staying during the Show. It is felt that this new service will be of convenience to both exhibitors and mill men. The location of the booths may be determined by reference to the floor diagrams shown herewith. All exhibits from 1 to 199 are located on the first floor of the main building; those from 200 to 299 are on the second floor of the main building; those from 400 to 478 are in the Permanent Annex adjoining the first floor of Textile Hall; and those from 479 to 485 are in the temporary annex.

The name of the hotel or other address of each representative will be found opposite his name in the listing. Where no information appears concerning representatives this was not given by the exhibtor.

ABBOTT MACHINE CO., **Booth No. 214, 215, 239.**
Wilton, N. H. **2nd Fl. Main Bldg.**

W. G. Abbott, Jr., Sales Mgr.	Poinsett
A. S. Thomas, Sou. Rep.	---
W. L. Perry, Engineer	Poinsett
J. G. Sanders, Service	Poinsett

ALDRICH MACHINE WORKS **Booth No. 103**
Greenwood, S. C. **1st Fl. Main Bldg.**

A. P. Aldrich, Jr., Sales Mgr.	Imperial
Robert Aldrich, Plant Mgr.	Imperial

ALLIS-CHALMERS MFG. CO. **Booth No. 477**
Milwaukee, Wis. **Perm. Annex**

Berrien Moore, Atl. Mgr.	Poinsett
Wm. Parker, Char. Mgr.	Poinsett
Harry S. Roberts, Engineer	Poinsett
A. T. Richardson, Engineer	Poinsett

ALUMINUM CO. OF AMERICA **Booth No. 423**
Pittsburgh, Pa. **Perm. Annex**

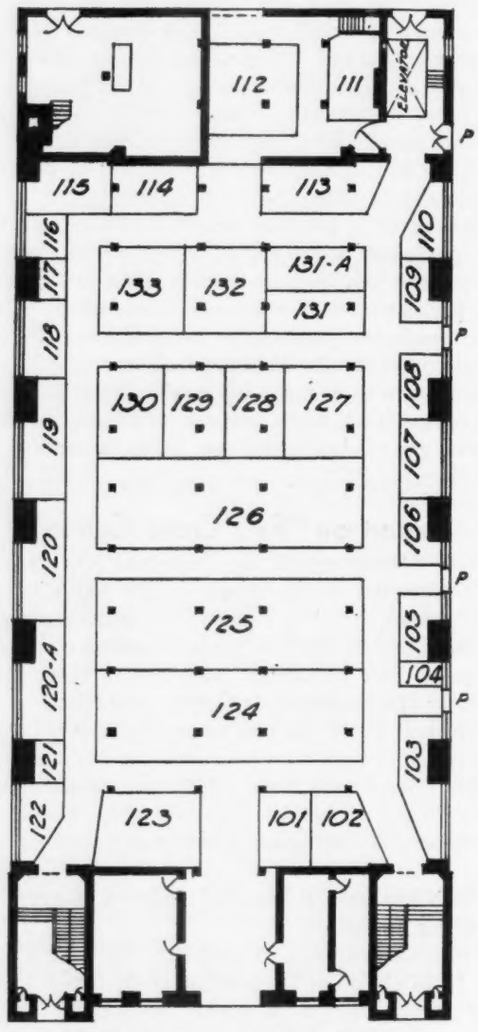
Frank L. Magee	Poinsett
H. A. Lilly	Poinsett
V. N. Mooney	Poinsett
R. H. Rigg	Poinsett
P. T. Teague	Poinsett
R. C. Bradbury	Poinsett
H. J. Fahrney	Poinsett
D. M. Johnston	Poinsett

AMERICAN BEMBERG CORP. **Booth No. 482**
261 Fifth Ave., N. Y. C. **Temp. Annex**

B. C. Dunlop, Vice-Pres.
W. Schlie, Sales Mgr.
C. Chester Bassett, Char. Office
H. A. Chapell, Sales Rep.
T. H. Johnson, Knitting Tech.
Mrs. L. Huston, Educa. Bureau
E. C. Morse, Merchandising Dept.

AMERICAN ENKA CORP. **Booth No. 402-403-404**
Enka, N. C. **Perm. Annex**

C. McD. Carr, Vice-Pres.	Poinsett
H. H. Anning, Gen. Sales Mgr.	Poinsett
R. J. Mebane, Sou. Mgr.	Poinsett
Brown Mahon, Sales Promotion	Poinsett
C. Vanderhooven, Sec.	Poinsett



FIRST FLOOR, MAIN BUILDING
Housing Exhibits from No. 101 to 199.

AMERICAN HARD RUBBER CO. **Booth No. 443-444**
11 Mercer St., New York City. **Perm. Annex**

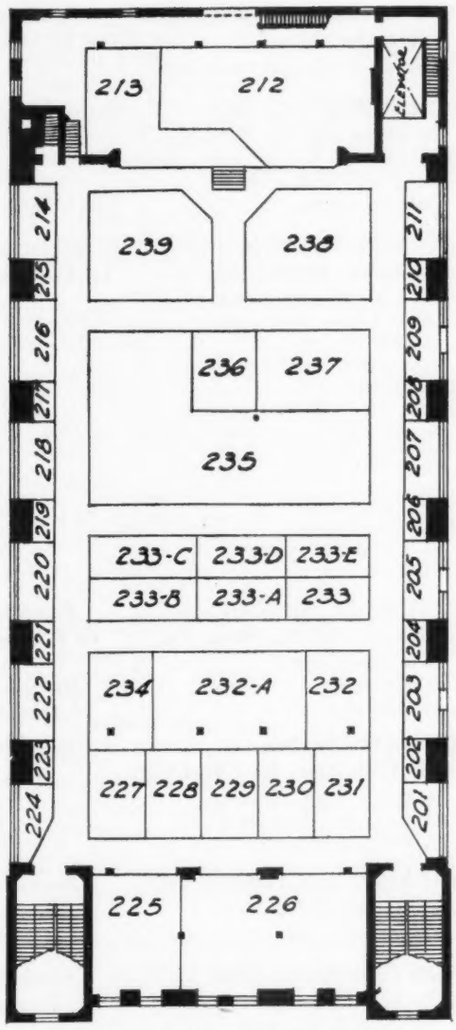
J. N. McLaren	Poinsett

AMERICAN MOISTENING CO. **Booth No. 126-A**
Providence, R. I. **1st Fl. Main Bldg.**

F. J. Orme, Asst. Gen. Mgr.	Poinsett
W. L. Burgess, Sales Eng.	Poinsett
J. D. Johnson, Sales Eng.	Poinsett
W. L. Johnson, Sales Eng.	Poinsett
Marvin McCall, Sales Eng.	Poinsett

AMER. WOOL & COTTON REPORTER **Booth No. 211**
530 Atlantic Ave., Boston, Mass. **2nd Fl. Main Bldg.**

C. Randolph Bennett, Publisher	Imperial
James A. Greer, Sou. Mgr.	---
A. A. Underwood, Vice-Pres.	Imperial
H. E. Nagus, Vice-Pres.	Ottaray



SECOND FLOOR, MAIN BUILDING
Housing Exhibits from No. 200 to 299

ARMSTRONG CORK & INS. CO. — Booth No. 132
Lancaster, Penn. — 1st Fl. Main Bldg.

W. B. Tucker, Asst. Sales Mgr.	202 River St.
T. L. Hill, G'ville Mgr.	202 River St.
R. C. Trask, Salesman	202 River St.
L. C. Bayless, Salesman	202 River St.
V. Ashley, Salesman	202 River St.

ARMSTRONG MACHINE WORKS — Booth No. 411
Three Rivers, Mich. — Perm. Annex

O. E. Ulrich, Fac. Rep.	----------
A. T. Shepherd, Dis. Rep.	----------
R. F. Phipps, Dis. Rep.	----------

ASHWORTH BROTHERS — Booth No. 133
Charlotte, N. C. — 1st Fl. Main Bldg.

ATLANTA BRUSH CO. — Booth No. 429-430
337 Tanner St., Atlanta, Ga. — Perm. Annex

T. C. Perkins, Pres.	Imperial
H. R. Cook, Vice-Pres.	Imperial
George B. Snow, Salesman	Imperial

ATWOOD MACHINE CO. — Booth No. 237
Stonington, Conn. — 2nd Fl. Main Bldg.

E. H. Peirce, Gen. Mgr.	Poinsett
I. R. Rowe, Chief Eng.	Poinsett
A. L. Lewis, Gen. Sales Mgr.	Poinsett
Fred Sails, Sou. Rep.	Poinsett
Harold Morton, Erector	———

BAHNSON COMPANY, — Booth No. 216-217-218
Winston-Salem, N. C. — 2nd Fl. Main Bldg.

A. H. Bahnson, Pres.	Poinsett
F. F. Bahnson, Vice-Pres.	Poinsett
Arvin Page, Asst. Chief Eng.	Poinsett
S. C. Stimson, Sales Eng.	Poinsett
Ira L. Brown, Sales Eng.	Poinsett

BARBER-COLMAN CO. — Booth No. 235
Rockford, Ill. — 2nd Fl. Main Bldg.

B. A. Peterson, Sales Dir.	Imperial
R. E. McCausland, Field Mgr.	Imperial
R. G. Ross, Field Supt.	Imperial
W. B. Anderson, Boston Mgr.	Imperial
J. E. Moore, Sales Eng.	Imperial
J. H. Spencer, G'ville Mgr.	---------
N. H. Alford, Asst. G'ville Mgr.	---------
S. R. McElroy, Installation Supt.	———
L. S. Ligon, Installation Supt.	———

CHARLES BOND CO. — Booth No. 481-A
617 Arch St., Philadelphia, Pa. — Temp. Annex

C. Carter Bond, Mgr. Belting Dept.	Poinsett
John C. Turner, Rep.	Poinsett
Harold C. Smith, Rep.	Poinsett

BORNE, SCRYMSER CO. — Booth No. 464
17 Battery Place, New York City. — Perm. Annex

Hughes L. Siever	———
W. B. Uhler	———
R. B. Smith	———

BRISTOL COMPANY — Booth No. 233
Waterbury, Conn. — 2nd Fl. Main Bldg.

E. L. Stilson, Dist. Mgr.	Poinsett
D. D. Ault, Sales Eng.	Poinsett

H. W. BUTTERWORTH & SONS CO. — Booth No. 120-A
Philadelphia, Pa. — 1st Fl. Main Bldg.

J. E. Butterworth, Vice-Pres.	———
J. H. Zahn, Sou. Mgr.	———
G. W. Steiger, Package and Beam Dyeing Mgr.	———
August Rick, Erector	Imperial

CLING SURFACE CO. — Booth No. 458
1032 Niagara St., Buffalo, N. Y. — Perm. Annex

G. N. Parker, Vice-Pres.	Poinsett
J. J. Boyd, Salesman	Poinsett

CLINTON CORN SYRUP REF. CO. — Booth No. 205
Clinton, Iowa. — 2nd Fl. Main Bldg.

J. Wm. Pope, Sou. Rep.	Poinsett
Luther Knowles, Sou. Rep.	Poinsett
Geo. E. Corson, Mgr. Tex. Dept.	Poinsett

CLIPPER BELT LACER CO. — Booth No. 221
Grand Rapids, Mich. — 2nd Fl. Main Bldg.

Perry J. Edwards, Rep.	Poinsett

CONTINENTAL-DIAMOND FIBRE CO. — Booth No. 106
Bridgeport, Pa. — 1st Fl. Main Bldg.

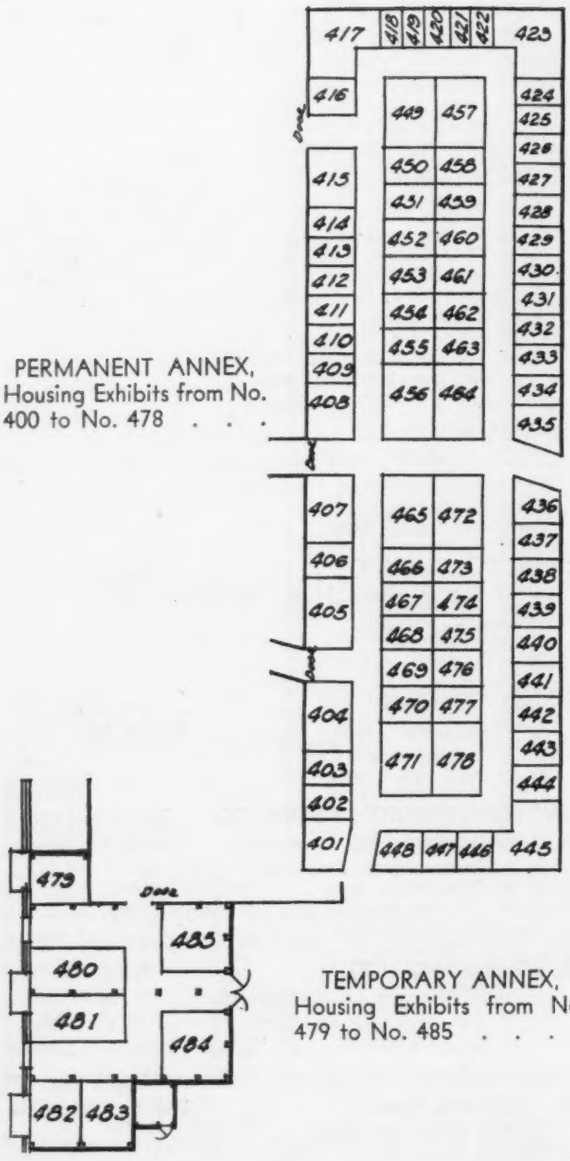
L. T. McCloskey, Vice-Pres.	Virginia
C. L. Simmons, Sou. Rep.	———
N. N. Wright, Sales Mgr.	Virginia

CORN PRODUCTS REFINING CO. — Booth No. 457
17 Battery Place, New York City. — Perm. Annex

W. R. Cathcart, Tech. Dir.	Poinsett Hotel
J. R. White, Sou. Mgr.	Woodside Bldg.
Albert G. Smith, Salesman	Woodside Bldg.
J. C. Alexander, Salesman	Woodside Bldg.
C. G. Stover, Salesman	Woodside Bldg.
W. R. Joyner, Salesman	Woodside Bldg.

COTTON, — Booth No. 408
1020 Grant Bldg., Atlanta, Ga. — Perm. Annex

W. J. Rooke, Vice-Pres.	Poinsett
Robert W. Philip, Editor	Poinsett
J. C. Cook, Western Mgr.	Poinsett
J. B. Shaw, Gen. Sales Mgr.	Imperial
W. A. McGee, Carolina Mgr.	Imperial
N. J. Phelan, Sub. Rep.	12 E. Stone Ave.



CRANE COMPANY, Booth No. 460-461-462
836 S. Michigan Ave., Chicago, Ill. Perm. Annex

W. F. Lahl, Asst. Mgr. Specialty Sales Div.	Imperial
L. J. Spencer, Atl. Division	Imperial
P. F. Sackett, G'ville Mgr.	Imperial
J. A. Graney, C'lotte Mgr.	Imperial
J. A. McMurry, Sales Eng., Atlanta	Imperial
G. W. Sutton, Sales Eng., Knoxville	Imperial
A. Marshall, Sales Eng., Asheville	Imperial

CROMPTON & KNOWLES LOOM WORKS, Booth No. 125-A
Worcester, Mass. 1st Fl. Main Bldg.

S. B. Alexander, Charlotte Mgr.	Poinsett
S. P. V. Desmond, Salesman	Poinsett
R. M. Deal, Salesman	Poinsett
J. C. Irvin, Salesman	Poinsett
T. P. Graham, Supply Mgr.	Poinsett

CROUSE-HINDS CO. Booth No. 471
Syracuse, N. Y. Perm. Annex

CURTIN-HOWE CORPORATION, Booth No. 210
New York City. 2nd Fl. Main Bldg.

W. E. Norvell, Southern Mgr.	
Wilkins Cagle, Sales Eng.	108 Crescent Ave.

CURTIS & MARBLE MACHINE CO. Booth No. 225
Worcester, Mass. 2nd Fl. Main Bldg.

Walter F. Woodward, Sou. Rep. ———

DAVISON PUBLISHING CO. Booth No. 233-CX
50 Union Square, N. Y. C. 2nd Fl. Main Bldg.

DETROIT GRAPHITE CO., Booth No. 201
Detroit, Mich. 2nd Fl. Main Bldg.

DRAPER CORPORATION, Booth. No. 124
Hopedale, Mass. 1st Fl. Main Bldg.

Wallace I. Stimpson, Vice-Pres.	Poinsett
H. A. Billings, Works Mgr.	Poinsett
A. E. Stafford	Poinsett
E. N. Darrin, Vice-Pres.	Poinsett
C. H. Draper, Jr.	Poinsett
Walter M. Mitchell	Poinsett
John H. O'Neill	Poinsett
Charles H. Warren	Ottaray
Samuel E. Stone	Ottaray
Peter T. Quinn	Ottaray
Robert W. Poole	Ottaray
Thomas Henderson	Ottaray
L. C. Lockman	Ottaray
Howard L. Smith	Imperial

E. I. DU PONT DE NEMOURS & CO. Booth No. 122
1616 Walnut St., Phila., Pa. 1st Fl. Main Bldg.

S. W. Quisenberry	Poinsett
M. J. Hanger	500 Bennett St.
F. H. Aberly	Maryland Apt. 4

DU PONT RAYON CO. Booth No. 445
350 Fifth Ave., New York City. Perm. Annex

F. H. Coker, Dist. Sales Mgr.	Poinsett
H. O. Kennette, Salesman	Poinsett
O. F. Long, Salesman	Poinsett

DURANT MANUFACTURING CO. Booth No. 449
Milwaukee, Wis. Perm. Annex

Geo. P. Davis, Sou. Rep. Ottaray

DURIRON COMPANY, INC. Booth No. 449
Dayton, Ohio. Perm. Annex

W. H. Scott, Sales Mgr.	Ottaray
B. D. Spofford, Adv. Mgr.	Ottaray
Geo. P. Davis, Sou. Rep.	Ottaray

ECLIPSE TEXTILE DEVICES, INC. Booth No. 102
Elmira, N. Y. 1st Fl. Main Bldg.

J. P. Garey, Rep.	Poinsett
L. B. Hasbrouck, Rep.	Poinsett
J. D. Lutes, Rep.	Poinsett

ECONOMY ENGINEERING CO. Booth No. 449
2653 W. Van Buren St., Chicago, Ill. Perm. Annex

R. S. Kerr, Atl. Rep.	Ottaray
Geo. P. Davis, Char. Rep.	Ottaray

FAFNIR BEARING CO., Booth No. 105
New Britain, Conn. 1st Fl. Main Bldg.

C. F. Stanley, Sales Mgr.	Virginia
H. R. Reynolds, Chief Eng.	Virginia
Stanley Berg, Char. Rep.	Virginia
A. G. Laughridge, Atl. Rep.	Virginia

FIBRE SPECIALTY MFG. CO., Booth No. 478
Kennett Square, Pa. Perm. Annex

H. R. Chandler, Factory Mgr.	Poinsett
Ralph Woods, Sales Mgr.	Poinsett
Roy Henderson, Rep.	Poinsett
H. R. Stoops, Rep.	Poinsett

FINNELL SYSTEM, INC. Booth No. 110
Elkhart, Ind. 1st Fl. Main Bldg.

Reuben Finnell, Sou. Sales Mgr.	———
A. P. Sears, Atl. Mgr.	———
R. L. Phillips, Caro. Mgr.	———

FOSTER MACHINE CO., Booth No. 231
Westfield, Mass. 2nd Fl. Main Bldg.

T. E. Connor, Sales Mgr. ———
Fred P. Brooks, Sou. Rep. ———
R. W. Ensign, Sales Dept. ———

FOXBORO COMPANY, Booth No. 440
Foxboro, Mass. Perm. Annex

W. W. Barron, Sou. Mgr. ———
B. B. Peacock, Dis. Mgr. ———
C. E. Sullivan, Gen. Sales Mgr. ———
J. B. McMahon, Chief Sales Eng. ———

GATES RUBBER CO., Booth No. 219
Denver, Colo. 2nd Fl. Main Bldg.

Fred Siegrist, Div. Eng. 317 Walker Bldg.
Geo. R. Morgan, Dis. Rep. 317 Walker Bldg.
E. Van Hook, Dis. Rep. 317 Walker Bldg.
V. G. Brookshire, Dis. Rep. 317 Walker Bldg.
D. J. Broadhurst, Fac. Eng. 317 Walker Bldg.

GAYLORD CONTAINER CO. Booth No. 208
Box 368, Atlanta, Ga. 2nd Fl. Main Bldg.

Ben M. Williams, Gen. Sales Mgr. Ottaray
R. Scott Baum, Char. Mgr. Ottaray
S. P. Bellsinger, S. C. & Ga. Rep. Ottaray

GENERAL ELECTRIC CO. Booth No. 116-117-118
Schenectady, N. Y. 1st Fl. Main Bldg.

W. W. Cronkhite Poinsett
W. H. Tate Poinsett
F. C. Alexander Poinsett
O. L. Cantrall Poinsett
A. W. Baker Poinsett
R. H. Jackson Poinsett
E. D. McKellar Poinsett
T. H. Reeves Poinsett

GENERAL ELECTRIC CO. Booth No. 118-A
(Incandescent Lamp Div.) Atlanta, Ga.
1st Fl. Main Bldg.

T. W. Moore, Southeastern Div. Mgr. Virginia
E. F. Baesel, Charlotte Office Virginia
G. E. Park, Charlotte Office Virginia
C. M. Reynolds, Columbia Office Virginia

GENERAL ELECTRIC VAPOR LAMP Booth No. 115
CO., Hoboken, N. J. 1st Fl. Main Bldg.

Charles F. Strebig, Sales Mgr. Poinsett
D. R. Grandy, Com. Eng. Poinsett
W. W. Becky, Reg. Mgr. Poinsett
F. E. Keener, Atl. Mgr. Poinsett
J. P. Baum, Jr. Salesman Poinsett
C. N. Knapp, Char. Mgr. Poinsett

GERRARD COMPANY, Booth No. 233-A
2915 W. 47th St., Chicago, Ill. 2nd Fl. Main Bldg.

V. J. Gerrity, Asst. Gen. Sales Mgr. Poinsett
W. B. Renols, Sou. Div. Mgr. Poinsett
W. E. Bryan, Rep. Poinsett

GILMAN PAINT & VARNISH CO. Booth No. . . .
Chattanooga, Tenn. . . . . . .

GRATON & KNIGHT COMPANY, Booth No. 405
Worcester, Mass. Perm. Annex

H. W. Tuxbury, Sales Mgr. Spec. Div. Poinsett
P. M. Arnall, Asst. Gen. Sales Mgr. Poinsett
C. W. Stanton, S. C. Rep. Poinsett
O. D. Landis, N. C. Rep. Poinsett
C. C. Anderson, Sou. Rep. Poinsett
D. A. Ahlstrand, Ga., Fla., Ala. Rep. Poinsett

H. & B. AMERICAN MACHINE CO. Booth No. 130
Pawtucket, R. I. 1st Fl. Main Bldg.

J. Carlile Martin, Sou. Agt. Poinsett
Thomas Aspden, Salesman Poinsett
Arthur J. Drabble, Salesman Poinsett
Fred Wright, Salesman Poinsett
J. W. Rimmer, Nor. Agt. Poinsett
E. L. Martin, V-P & Gen. Mgr. Poinsett

HERMAS MACHINE CO., Booth No. 133-A
Hawthorne, N. J. 1st Fl. Main Bldg.

G. H. Mason, Pres. c/o Mrs. R. E. Houston 411 E. Washington St.
C. Lucas, Eng. c/o Mrs. R. E. Houston 411 E. Washington St.
Sterling Graydon, Sou. Agt. c/o Mrs. J. W. Arrington 509 E. Washington St.
J. S. Weir, Sou. Agt. c/o Mrs. J. W. Arrington 509 E. Washington St.
H. B. Curtis, Sou. Agt. c/o Mrs. J. W. Arrington 509 E. Washington St.
W. S. Anderson, Sou. Agt. c/o Mrs. J. W. Arrington 509 E. Washington St.

E. F. HOUGHTON & CO., Booth No. 413-414-415
Philadelphia, Pa. Perm. Annex

Geo. S. Rogers, Asst. Gen. Sales Mgr. Poinsett
C. G. Schultze, Sales Mgr. Poinsett
H. C. Roberts, Textile Sales Mgr. Poinsett
H. J. Waldron, Dis. Mgr. Poinsett
R. J. Maxwell Poinsett
J. M. Keith Poinsett
J. A. Brittain Poinsett
Porter H. Brown Poinsett
D. O. Wylie Poinsett

HOWARD BROS. MFG. CO. Booth No. 474-475-476
44-46 Vine St., Worcester, Mass. Perm. Annex

Harry C. Coley, Pres. ———
Guy L. Melchor, Sr., Atlanta Rep. ———
Guy L. Melchor, Jr., Rep. ———
E. M. Terryberry, Gen. Sales Agt. ———

HUBBARD BROTHERS & CO. Booth 206-207-A
. . . . . 2nd Fl. Main Bldg.

HUNTINGTON & GUERRY, Booth No. 432
Greenville, S. C. Perm. Annex

R. S. Huntington, Pres. River & Hammond Sts.
DuPont Guerry, Jr., Vice-Pres. River & Hammond Sts.
J. H. Howard, Sec. River & Hammond Sts.
J. A. Keller, Com. Mgr. River & Hammond Sts.

HYATT ROLLER BEARING COMPANY, Booth No. 456
Newark, N. J. Perm. Annex

H. O. K. Meister, Asst. Gen. Mgr. Poinsett
H. K. Porter, Gen. Sales Mgr. Poinsett
W. L. Iliff, Eastern Sales Mgr. Poinsett
F. U. Naughton, Tex. Eng. Poinsett
E. P. O'Neill, Tex. Eng. Poinsett
J. M. Grady, Dis. Eng. Poinsett
H. M. Carroll, Adv. Mgr. Poinsett

INTERNATIONAL NICKEL CO., INC. Booth No. 107
67 Wall St., New York City. 1st Fl. Main Bldg.

C. J. Bianowicz, Salesman Poinsett
J. F. Nation, Salesman Poinsett
J. M. Tull, Distributor Poinsett

JENKINS BROTHERS, Booth No. 441-442
80 White St., New York City. Perm. Annex

B. R. Wofford, Rep. ———

JOHNS-MANVILLE Booth No. 120
292 Madison Ave., N. Y. C. 1st Fl. Main Bldg.

A. S. Royal, Rep. Poinsett
R. T. McManeus, Char. Mgr. Poinsett
J. H. Olden, Atl. Mgr. Poinsett
F. C. Alexander, Asst. Atl. Mgr. Poinsett

KEEVER STARCH COMPANY, Booth No. 407
Columbus, Ohio. Perm. Annex

Charles J. Kurtz, Pres. Poinsett
Daniel H. Wallace, Sou. Agt. 110 E. Prentiss
Claude B. Iler, Sou. Rep. 202 Walnut
L. J. Castile, Sou. Rep. Imperial
F. M. Wallace, Sou. Rep. 110 East Prentiss

A. C. LAWRENCE LEATHER CO. Booth No. 448
Peabody, Mass. Perm. Annex

H. H. Hersey, Rep. ———

THOS. LEYLAND MACHINERY CO. — Booth No. 431
Boston, Mass. — Perm. Annex

F. T. Walsh, Pres.	Imperial
Arthur Isherwood, Mech. Supt.	Imperial

MANHATTAN RUBBER MFG. DIVISION RAYBESTOS-MANHATTAN, INC.
Booth No. 418-419-420-421-422
Passaic, N. J. — Perm. Annex

E. A. Hamilton, Birmingham Mgr.	Poinsett
C. P. Shook, Sales Rep.	Poinsett
E. H. Olney, Sales Rep.	Poinsett
Joe P. Carter, Service Rep.	Poinsett
W. Warr, Mech. Eng.	Poinsett

MANUFACTURERS RECORD, — Booth No. 424-425
Baltimore, Maryland — Perm. Annex

MATHIESON ALKALI WORKS, — Booth No. 469-470
250 Park Ave., New York City. — Perm. Annex

Fred O. Tilson, Sou. Mgr.	Poinsett
J. W. Ivey, Salesman	Poinsett
R. C. Staples, Salesman	Poinsett
M. K. Sanders, Salesman	Poinsett

MELLIAND TEXTILE MONTHLY, — Booth No. 459
Woolworth Bldg., New York City. — Perm. Annex

MERROW MACHINE CO., — Booth No. 203-A
28 Laurel St., Hartford, Conn. — 2nd Fl. Main Bldg.

J. M. Washburn, Treas.	Poinsett
E. W. Hollister, Factory Rep.	Poinsett
R. B. Moreland, Factory Rep.	Poinsett

N. Y. & N. J. LUBRICANT CO. — Booth No. 109
292 Madison Avenue, N. Y. C. — 1st Fl. Main Bldg.

W. F. Kimball, Pres.	_____
Jos. H. Bennis, Vice-Pres.	_____
L. W. Thomason, Sou. Dis. Mgr.	_____
Falls L. Thomason, Rep.	_____
J. A. Sorrells, Jr., Rep.	_____
W. C. Taylor, Rep.	_____
F. D. Jacoway, Rep.	_____

PARKS-CRAMER CO. — Booth No. 127
Fitchburg, Mass. — 1st Fl. Main Bldg.

P. A. McKittrick, Treas. & Gen. Mgr.	_____
W. B. Hodge, Vice-Pres.	_____
H. B. Rogers, Salesman	_____
O. G. Culpepper, Salesman	_____
W. H. Burnham, Salesman	_____
J. F. Porter, Salesman	_____
J. R. Henderson, Salesman	_____
E. S. Rothrock, Salesman	_____

PENICK & FORD SALES CO., INC. — Booth No. 220
Cedar Rapids, Iowa. — 2nd Fl. Main Bldg.

Guy L. Morrison	Poinsett
C. T. Lassiter	Poinsett
J. H. Almand	Poinsett
D. P. O'Connor	Poinsett
C. W. Bloomhall	Poinsett

PERMUTIT COMPANY, — Booth No. 409-410
440 Fourth Ave., New York City. — Perm. Annex

L. S. Ferguson, Asst. Sales Mgr.	Imperial
D. J. Saunders, Sales Rep.	Imperial
H. H. Morrison, Sales Rep.	Imperial
N. D. Doane, Sales Rep.	Imperial

QUAKER CITY CHEMICAL CO., — Booth No. 222
Philadelphia, Pa. — 2nd Fl. Main Bldg.

W. S. McNab, Vice-Pres.	Poinsett
Robert Cowan, Chem. Eng.	Poinsett
H. E. McNab, Salesman	Poinsett

RAYON, — Booth No. 439
New York City. — Perm. Annex

REEVES PULLEY CO. — Booth No. 233
Columbus, Indiana — 2nd Fl. Main Bldg.

C. L. Irwin, Sales Mgr.	Ottaray
D. W. Clem, N. Y. Mgr.	Ottaray
Alfred Jepson, Sales Eng.	Ottaray
D. M. McSpadden, Sales Eng.	_____

RHODE ISLAND WARP STOP EQUIPMENT CO., Pawtucket, R. I. — Booth No. 119
1st Fl. Main Bldg.

Wm. D. Whittaker, Sou. Rep.	_____
W. L. Ferguson, Salesman	_____
W. A. McKinney, Salesman	_____
Geo. W. Smith, Salesman	_____

RICE, BARTON & FALES, INC. — Booth No. 125
65 Tainter St., Worcester, Mass. — 1st Fl. Main Bldg.

Lester M. Start, Sales Mgr.	Poinsett

R. & H. CHEMICAL CO., — Booth No. 233BX
Niagara Falls, N. Y. — 2nd Fl. Main Bldg.

J. C. Robertson, Peroxide Service Division
C. D. Potter, Peroxide Service Division
LeRoy Kennette, Sales Division
S. C. Harris, Sales Division

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RAYON WEAVING in the SOUTH

Article 2. An Example--Burlington Mills

By H. W. Rose
The Viscose Company

IN this second article, Mr. Rose continues a discussion of the subject by describing in detail the origin, growth and expansion of the Burlington Mills group, established and developed and operated by J. S. Love and associates—as a specific example of the tremendous strides made within a brief period in the weaving of rayon fabrics in the South. Copies of the first article are available . . .

WE have considered some of the major stepping stones, technical and economic, by which the rayon weaving industry in the South attained its present importance in the textile field. We have noted how the several types of mills have evolved in that particular branch of the industry and how today they form distinct classifications according to that evolution and the types of fabrics that they make. In order to trace the evolution in more detail it may be interesting to take typical specific mills, and because of the variety of classifications it may be interesting to take a group of mills that is well diversified.

The Burlington Mills group, headed by J. Spencer Love, is composed of fourteen plants in the growth of which advantage has been taken of the major trends that we have touched upon. In fact, after the first few years in the field, when new units began to be added, this group became a trend in itself, and as such has been regarded with interest by everyone in the field. For these reasons let us trace the development of the organization from its origin in Gastonia.

The Gastonia Cotton Manufacturing Company operated for years spinning cotton yarns and weaving heavy cotton two-ply scrims and dress goods. In 1924 a few pounds of rayon were run in as an experiment. It was more in the nature of a salute of recognition to the new fiber than a serious effort, but it was indicative.

That same year J. Spencer Love sold the mill in Gastonia and moved the machinery to Burlington, where was organized Burlington Mills, Inc., and a plant was built. There is something very human in the building of a wooden wall on the fourth side of a brick mill, a gesture of faith in the present and hope for the future. It was well justified in building the Burlington Mills plant, for if all the sides had been wooden they would not have taken care of the expansion to come.

The mill started in making the same heavy cotton buntings and two-ply weaves that had been run in Gastonia, but it was not long before rayon was introduced in the mill. The first rayon went into the filling of 40-inch cotton warp bedspread material which was later seamed to get the full width of the spread. There were distinct signs of a steady demand for other rayon and cotton mixtures but new looms were needed. Accordingly the old cotton looms were junked and new dobby looms were installed. This move was important and was characteristic of all later activity. It requires freedom from hampering tradition and considerable courage to scrap machinery that is still capable of doing its work, and the leaders in the weaving industry today are those who have met these requirements. Not only does a policy of buying new machinery keep a mill economically and technically well out front in competition, but the policy of scrapping old machinery prevents that machinery remaining in competition in the same field on lower quality fabrics.

Blank-Stoller

J. Spencer Love
Organizer and head of the Burlington Mills, which are described in this article . .

The next step was to get rid of the spinning machinery and replace it with more new dobby looms. It was found that a weave room was more flexible in meeting changing market requirements if it did not have the restricting responsibility of using certain cotton yarns from the spinning room and particularly with the increasing poundage of rayon purchased. The Burlington Mills ceased to be a cotton mill in the old sense of the word and became a weaving plant.

Rayon bedspreads steadily increased in popularity, and it was decided to increase production. Since the looms in Burlington Mills were limited to 40 inches it was necessary to add equipment. A new organization was formed for the purpose, Holt, Love & Smith, Inc. A new building was erected near the other and 48 Jacquard looms were installed which later grew into a plant of 180 broad looms. They have concentrated on cotton and rayon bedspreads and ticking, and now a cutting and edging department finishes the spreads and packs them ready for direct wholesale and retail distribution. This same plant is now also making up finished and lined drapery sets.

The third mill to be built was the North Carolina Silk Mills, Inc., in 1928, four years after the beginning in Burlington. It now contains 180 dobby silk looms and preparation departments for spooling,

A view in one of the display rooms of the downtown New York sales offices of Burlington Mills . . . . . .

quilling and warping. It started up on silk georgettes and other staple silk fabrics, but meanwhile rayon was earning a large place in the fine dress goods field. Rayon replaced silk in this mill when the demand for rayon goods became greater than could be handled at Burlington Mills. It was not necessary to make any great changes of equipment.

A fourth plant was started soon after, Piedmont Weavers, Inc. It is now equipped with 50 Jacquard and 254 dobby silk looms. This unit has run mostly on rayon crepes, although its loom equipment gives considerable flexibility as to choice in the dress goods field.

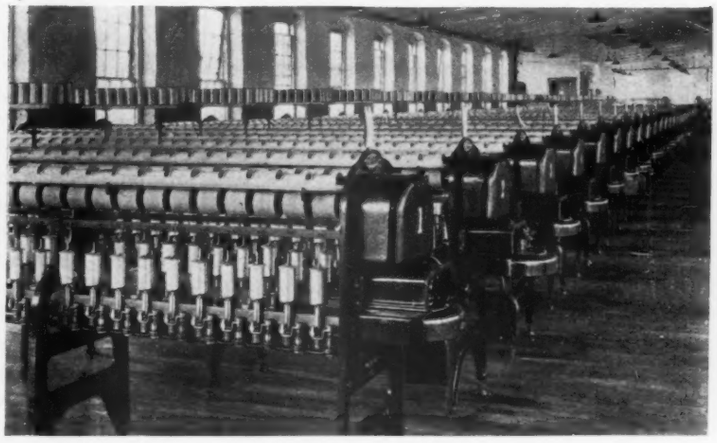
By 1930 there was a market for even greater quantities of rayon dress goods than the looms in the group could handle. At this point began a different phase in the expansion. The main need was additional new silk looms, and how they were housed was of secondary importance. Saving on brick and mortar meant more looms for the same amount of capital. There were several old gingham mills in Alamance County, mills that had made industrial history in the South, but that had seen their day and had gone down in the struggle for the small gingham market that remained.

The Elmira Mill was standing idle, and Mr. Love found space there to house the equipment of his newest and fifth corporation, Alamance Weaving Company. The old gingham looms that had woven millions of yards of cloth and still could do a day's work were broken up to make way for 184 dobby silk looms. A complete processing department was built up, including winding, warping and sizing, including cone creels for high speed warping. Crepe filling of high twist rayon was by this time being used in such quantity that it seemed advisable to equip to throw at least a portion of it, and a department was installed at this mill using the cotton system.

The Holt Granite Puritan Mill at Fayetteville was also standing idle after having run its course on ginghams. With the co-operation of the Cone interests in Greensboro, and others, it was taken over by the group and now houses the Puritan Weaving Company. Here again the same progressive policy was followed of scrapping old machinery and replacing it with 192 new dobby looms for fine goods, with the necessary preparation machinery, including twisting and throwing.

The seventh mill to be added to the group was neither an old obsolete one nor was it built new at this time. The County Moore Mill at Hemp was built for fine rayon weaving during the early part of the new trend in concentrating on the weaving end of the industry. Unfortunately it was handicapped in having too few looms for economical operation, and it could not survive in that condition. When it was added to the group in 1931 additional new silk dobby looms were installed, bringing the total in that mill up to 264. This crowded out the preparation department and necessitated the building of a new wing which nearly doubled the size of the mill. Throwing machinery was also installed in this new department. It was the silk type, as it had been found that twisting by the cotton system did not fill every requirement of the diversified line of rayon crepe goods that was now being produced.

The production capacity on fine dress goods was now well rounded, and the next move was in the direction of further diversification. The old Aurora Cotton Mills in Burlington had seen its most fruitful days, and the main building was now used to house the eighth unit of the group, the Sherwood Tapestry Mills. 162 Jacquard and 52 dobby looms were installed to replace the old machinery, along with cone creels and other up-to-date preparation machinery. This unit with other Jacquard looms in the group has worked up a wide variety of lines in cotton and rayon draperies, upholstery, and tapestry, as well as



Courtesy, Atwood Machine Co.

A view of an installation of several thousand spindles of single-deck twisters for twisting rayon crepe . . . . . .

Courtesy, Cocker Machine & Foundry Co.

Warping rayon at high speed is being accomplished successfully. The illustration shows a line of rayon warpers . . . . . .

Jacquard rayon crepes.

These goods and other colored fancy production of the group are sold through a well organized separate department in the group's New York organization, and it was decided that in order to control all the processes in offering a finished fabric they should take care of the finishing. Accordingly the Burlington Dyeing and Finishing Company was formed and housed in another building of the former Aurora Cotton Mills, across the street from the weaving plant. In the same building is a laboratory for testing yarns and for experimental development, and also the central offices from which the entire group of mills and the New York offices are directed.

The next link in the chain was the Duchess Fabric Corporation, which took over the plant of the Gagner Manufacturing Company in Statesville. This plant, like the one at Hemp, had been built for rayon weaving and was well adapted to the needs of the group in its plan for still further fabric diversification. It has been lined up for manufacturing highly specialized rayon and cotton drapery and brassiere cloths on 80 Jacquard and 8 dobby looms.

The eleventh and twelfth units in the Burlington group as it stands today were installed in another venerable and obsolete mill at Ossipee, a few miles out of Burlington. There is housed the Rayon Fabrics Corporation, operating 178 dobby silk looms, and the United Throwing Company which supplies thrown yarn to various other weaving mills in the Burlington Mills group.

The latest addition to the group is the former Klotz plant at Reidsville, N. C., taken over a few months ago. It contains 150 broad silk looms and silk throwing machinery, and is in full operation on the season's dress goods.

Affiliated with the group is the Southern Dyeing Company of Burlington. Although this firm serves the trade in general, it does practically all the cotton and rayon yarn dyeing for the Burlington Mills group, and in that capacity it practically completes their well-rounded picture.

Thus we find that in growing from one cotton mill in 1924 to a group of fourteen corporations eight years later, four new plants have been built, three not new but up-to-date plants have been taken over, and the various buildings of four older plants are being used. They house 1796 dobby looms, 652 Jacquard looms, 8,000 spindles for throwing rayon by the cotton system, 26,000 spindles by the silk system, and all the preparation and finishing machinery, as well as stock and warehousing. It is done far more economically of invested capital than could have been accomplished in building one large mill.

In addition to economy in fixed capital investment the group runs on an economical system of working capital. Through financial factoring of goods in process a maximum turnover of the dollar is accomplished and consequently a maximum volume of goods per dollar of working capital is secured. The group accomplishes further economies through centralized management and centralized buying. Only a few months ago an operating agreement was reached between six of the units in Burlington, which means even closer centralization than had been possible when the separate corporations were organized and originally grouped.

Economies in Manufacturing and Distribution.

Besides these advantages in concentration they enjoy others in distribution. The manufacturing units are located in six different towns. This means that instead of drawing labor from all directions and inflating the population of one community, the mills are scattered through six different communities where labor is obtainable and can reside with a minimum of social and industrial problems. This is in keeping with the general tendency of textile growth in the South that so far has promoted welfare and happiness. With transportation and communication becoming easier every day the trend will probably continue in that direction.

Has Own Selling Organizations.

The Burlington Mills group has its own selling organizations in New York. Here again is the combination of concentration and distribution. It is all under central direction, but the departmental branches are located so as to be in closest touch each with its own market reaching all distributive branches of trade and covering the entire country. Both the entire sales organization and the manufacturing units are under the supervision of Mr. Love, a fact which makes unusual co-ordination and flexibility in the chain of processes.

Slashing-Weaving, Mechanical Topics Discussed in Atlanta Meeting

Reported by Robert W. Philip

THE experiences of practical mill men on a variety of practical mill subjects, in the slashing-weaving and mechanical departments, will be found in this complete account of the discussions at the meeting of the Textile Operating Executives of Georgia in Atlanta last month.

Albert Lehmann, Jr., heads the organization for the coming year, with George S. Elliott as vice general chairman. D. R. Senn and J. B. Jones added to executive committee. . . . . .

DISCUSSION of a number of practical topics on slashing-weaving and mill mechanical subjects, and an address by Norman E. Elsas, president of the Cotton Manufacturers Association of Georgia, featured the semi-annual meeting of the Textile Operating Executives of Georgia, held at Georgia Tech, in Atlanta, on Friday, September 23rd. There was a good attendance of Georgia superintendents and overseers, who comprise the organization, and a number of visitors.

E. H. Rogers, agent, Fulton Bag & Cotton Mills, Atlanta, presided at the meeting. D. R. Senn, superintendent, Enterprise Mfg. Co., Augusta, Ga., conducted the slashing-weaving discussion, held at the morning session, and Comer Turley, mechanical superintendent, Pepperell Mfg. Co., Lindale, Ga., led the mechanical discussion which was held during the afternoon session that concluded the meeting.

In the election of officers for the coming year, Albert Lehmann, Jr., superintendent, Dixie Cotton Mills, LaGrange, Ga., was made general chairman, and George S. Elliott, superintendent, Pacolet Mfg. Co., New Holland, Ga., succeeds Mr. Lehmann as vice-general chairman. John B. Jones, superintendent, Shawmut Mill, West Point Manufacturing Co., was made a member of the executive committee until September 1933 to fill Mr. Elliott's unexpired term on the committee; and D. R. Senn was elected to a full term until March 1935, succeeding D. D. Towers, whose term expired. Robert W. Philip, editor of COTTON, was re-elected secretary-treasurer.

Norman E. Elsas, secretary, Fulton Bag & Cotton Mills, Atlanta, who is president of the Cotton Manufacturers Association of Georgia, composed of the executive heads of the mills of the state, made a brief talk at the opening of the meeting on Friday morning. Bringing greetings from the financial executives of the mills of the state, he expressed genuine appreciation of the practical experimental work conducted by the Textile Operating Executives, declaring that the exchange of opinions and experiences developed at their meetings proves of material value to the individual members' plants in actual savings effected by information secured at the organization's discussions, and through its resources.

The practical discussions were based on a questionnaire previously submitted to the members. Mr. Senn, in opening the slashing-weaving discussion, brought up the first question, *"Do you find the changes in outdoor temperature and humidity have much effect on drying your warps? If so, do you have any way of meeting this trouble?"*

W. D. Massey, superintendent, Peerless Cotton Mills, Thomaston, Ga., answered that he has had some trouble along this line, but has found no practical remedy for it other than to slow the yardage on the slasher down to permit longer drying. Cliff Barnes, overseer of weaving, Exposition Cotton Mills, Atlanta, reported a similar experience and practice. Mr. Rogers pointed out that perhaps "this trouble would occur more on slashers with temperature control than on those not controlled". Chairman Senn said he did not imagine so, and Mr. Rogers explained that "perhaps since you require more pressure and more heat early in the mornings and on cold days in order to dry the warps, your controls would not permit of that, they would hold the heat down." Mr. Senn explained that to offset the trouble in question, he has a practice of starting the slashers at a slower speed than is run throughout the day in order to dry the warps. Mr. Rogers said that he increases the pressure on the cylinders while maintaining about the same speed.

Preventing Rust on Squeeze Rolls.

A member asked whether the action of the exhaust fans, in taking air out, would not prevent outside changes having an effect on the inside condition. Mr. Rogers pointed out that when air is taken out of the room by fans, other air must be introduced to replace it. Mr. Platt of Aragon stated that "usually, I notice, our humidifiers run about as much when it is raining as they do when it is not raining, where we have the automatic controls." Mr. Rogers stated that he has seen, on a cold day, a door opened near a slasher and could hear the condensate falling in the slasher, due to the sudden change in the temperature of the room.

The chairman asked George S. Elliott to explain his method to offset the difference in temperature, and he replied that "On cold mornings we run the slasher at slow speed for about two warps to allow the temperature to adjust itself properly." His slashers have controls, he stated.

Mr. Senn next asked, *"How do you prevent top*

squeeze rolls from rusting under the jacket? How often do you have to treat them?" V. J. Thompson, superintendent, Callaway Mills, Manchester, Ga., stated that he paints the rolls with white lead, which is the best thing he has found, and that this is done about every three months. Several others present reported this practice, which seems to be general. Walter Dillard, Jr., assistant superintendent, Sibley Mfg. Co., Augusta, suggested the possibility of using red lead—in a manner similar to painting tin roofs—declaring that there seems to be a chemical in the red lead that makes it a better rust preventive. Mr. Rogers pointed out that with white lead, the rusting of the roll shows through, and that he doubted whether, with red lead on it, it would be practicable to determine the condition of the rust on the roll.

Comer Turley, mechanical superintendent, Pepperell Mfg. Co., suggested that it would be entirely practical to "tin" the rolls, heating them to the fusion point and soldering, as in tinning any other piece of iron—and thus eliminate the possibility of rusting.

Temperature Controls on Slashers.

"Has anyone run sufficient test to establish the practical value of temperature controls on slashers?" was the next question. W. A. Powell, overseer weaving, Chicopee Mfg. Corp., Gainesville, answered that "we do not have controls on the cylinders, but on the size vat, and we like them there because we do not get any hard size, since we have a uniform temperature, and do not have any size boiling up and spotting the yarn, or size boiling over." Frank H. Cooper, assistant superintendent, Fulton Bag & Cotton Mills, reported entirely pleasing experience with controls on the size vats; but stated that their one experience with controls on the cylinder was unsatisfactory. He said the equipment was put on a slasher on which the steam went from the small cylinder into the large cylinder, and that it was necessary for them to run down on the valve until it was wide open in order to get sufficient temperature and pressure to dry the yarn. "On the size box, however," he said, "I think the control is very good."

George S. Elliott, of Pacolet, when called upon for his experience, stated that "we have had controls on our slashers, including the cylinders, for eight or nine years. When we first went into it we made all kinds of tests with the warps, and we decided that it was unquestionably the thing to do, judging by the results in reduced loom stoppage and better running work. We have the control only on the big cylinder, and we do not try to run steam from one cylinder to the other, having a separate line for each cylinder, and a separate trap." Answering questions as to the improvement in the running of the work, Mr. Elliott said that he got 7 to 8 per cent more production on looms with warps from the slashers equipped with controls. In getting the proper moisture content into the yarn, he worked up a bulletin board showing the speed and temperature at which to run different constructions for the correct moisture content, this being posted as a guide for the slasher man when changing from one number or set to another.

R. D. Harvey, superintendent, Pepperell Mfg. Co., Lindale, reported that in determining the effect of moisture in the warp when the yarn gets to the weave room, he once made two warps, one with four per cent moisture and the other with ten per cent, and ran them side by side in the weave room, and that both pieces of cloth contained approximately the same amount of moisture when woven. In this connection, Mr. Senn said, "it has always been my contention that if you put the proper humidity in the weave room that by the time the yarn runs from the warp to the harness you will have sufficient moisture in it."

Neither he nor Mr. Harvey, however, had tested the cloth for any comparison of breaking strength, while Mr. Elliott reported that he had found a 33 per cent variation in strength between cloth made with warps from controlled slashers and cloth made from warps from uncontrolled slashers—the difference being in favor of the controls.

Mr. Harvey asked Mr. Elliott if he had trouble keeping the controls in operating condition, and Mr. Elliott replied negatively, stating that when the controls were first installed, he took time off to take a control apart and explain it thoroughly to the man in charge. His master mechanic, Mr. Cheek, stated that in nine years they had had practically no repair jobs on the controls; their biggest responsibility being to keep the traps properly cleaned and the trash cleaned out.

Run-Outs on Slashers. Indigo Warps.

"What is considered a good run-out on the back of slashers for indigo warps? Give yarn numbers, ends in set, number of beams, etc." This was the next question. Walter Dillard, Jr., reporting for Sibley, stated that "a check on slasher waste over a period of three months shows 5.6 pounds of waste per set. This is based on 8s warp yarn, 5 beams per set, 378 ends per beam, 7,000 yards long—giving an average of about 1.1 pounds per beam. We have found in running mixed sets—white beams and indigo beams—the indigo waste will be about double the white, for instance, in a set of 12s yarn, 8 beams, 4 beams white, 317 ends and 4 indigo beams of 318 ends, we would have an average of six pounds with four pounds being indigo. This set is 12,000 yards long."

J. D. Walker, overseer slashing, Pepperell Mfg. Co., Lindale, reported the following run-outs on different yarn numbers:

8s yarn, 1969 ends, 5 beams: 5.1 pounds for the set.
14s yarn, 2196 ends, 6 beams: 5.82 pounds for the set.
17s yarn, 2492 ends, 6 beams: 6.09 pounds for the set.
19s yarn, 2568 ends, 6 beams: 5.28 pounds for the set.
21s yarn, 2370 ends, 6 beams: 5.10 pounds for the set.

Testing Stretch on Slashers.

"What is a simple method of testing the amount of stretch on slashers?" was the next question. J. C. Platt, superintendent, Aragon (Ga.) Mills, replied that "we installed a yardage counter on the back of the slasher and one on the front, and ran through a whole warp and took the two yardages, the difference, being the stretch, figured about one per cent." Mr. Platt said the front counter was on the padded roll,

so that the stretch figured was that between the squeeze roll and the pulling roll. Mr. Elliott reported using counters measuring by surface contact, front and rear, and that this total stretch was from 1.85 to 2 per cent; but that he got only 1.10 to 1.15 per cent measuring the stretch to the delivery roll.

Mr. Elliott asked here the difference in the running of the warp in mills which had installed automatic spoolers and warpers or high speed cone winders and warpers, as compared to old-style spooling and warping. Several men using the automatic spooler and high speed warper reported differences of from 25 to 50 per cent, pointing out that with the new style machine there is a better regulation of yardage, whereas with the old-style machines, there was slippage, inaccuracy as to wraps, and, with ball bearing

ALBERT LEHMANN, Jr., superintendent, Dixie Cotton Mills, LaGrange, Ga., elected general chairman, Textile Operating Executives . . . .

roll, a tendency for the roll to spin after the warper was stopped.

As to stretch, R. L. Zachry, assistant superintendent, Fulton Bag & Cotton Mills, reported figures ranging from ¾ to 2 per cent on various slashers, figuring the cylinder stretch only. One of these slashers was positive-driven, and produced .37 per cent stretch. He figured the yardage from the figures of the Barber-Colman warper and from a counter on the front of the slasher.

Someone asked Mr. Elliott if he had ever put both of his counters together on the beam at the front to compare their accuracy, and both he and Walter Dillard replied having done this and finding only about one yard difference in 1,200 yards.

Using Larger Shuttles.

Mr. Senn next asked: *"What are the advantages and disadvantages that result from shuttles for larger and longer bobbins?"* Mr. Rogers replied first, stating that "we put in some new shuttles, about 1-inch longer and perhaps ⅛-inch wider than usual, and we did not have such good experience with them. It is necessary in doing this to change the boxes, and the cams do not make enough shed for the larger shuttles and it is necessary to change the cams; and then if you do not change the whole job throughout you have odd bobbins to take care of. We changed 15 or 20 looms and then went back to our other shuttles." At the present time, he said, he is experimenting with a slightly larger shuttle, but no longer, being about 1/16-inch deeper, which allows the inside to conform to the curvature of the bobbin and permit a fuller bobbin; but that the bobbin is not changed.

V. J. Thompson reported going from an 8-inch to an 8¾-inch bobbin, with 15 per cent more filling on the bobbin; and "we find it all right. We did not change the diameter, only the length, and of course we had to put in longer boxes." Mr. Harvey said they had gone with success from an 8 to an 8¾-inch bobbin on coarse filling, 6s and below, and that this saves time in doffing, etc. Mr. Thompson said he is using the longer bobbin for his coarse yarn, 14s down, and his 8-inch bobbins on the yarn finer than that.

Shuttle with High Back Wall.

Mr. Platt asked for experiences with "shuttles with the back higher than the front, which allows just a little larger bobbin and conforms more to the angle of the shed as the shuttle passes through." Charles H. Warren, of the Draper Corp., was called upon and said there is an increasing call for a bobbin of this type, with the higher back wall, which allows more yarn on the bobbin and gives the back wall the advantage of the shed. He was asked also about a new type of back box plate, and explained this as having a wider shelf which steadies the shuttle and keeps it from turning. He said in answer to Mr. Rogers that the high-back shuttle had no more tendency to turn than an ordinary shuttle; and also that it wears no faster. He explained that on this type of shuttle the back wall is about 1/16-inch higher than the front of the shuttle.

Separating Day and Night Production.

The next question asked for a method of weighing cloth where weavers are paid by the pound, seconds records, day and night separation of cloth, etc. Mr. Shattle, overseer weaving, Fulton Bag & Cotton Mills, stated that they stamp *D* and *N* to distinguish between the day and night weavers, and that, while this enables them to determine who makes the seconds, it does not divide the cloth and that this is done according to the hours run on each shift. This appeared to be the customary practice when payment is made by the pound. Mr. Senn asked for experiences as to whether the night or day weaver did the most production, stating that he had complaints from the day shift, and installed pick counters which demonstrated that the night weavers were producing more than the day weavers. Mr. Dillard reported that they keep a record of seconds for each shift in dividing the cloth. Mr. Underwood stated that on their heavy duck the cloth is measured in the cloth room and payment made accordingly.

Selvage for Heavy Moleskin.

As to the next question, asking whether on three-harness work, it is better to draw four ends to the dent in the reed, etc., it appeared to be the general opinion that it is better to draw the same in the dent as the number of harness, that is, three to the dent for three-harness, and four to the dent for four-harness—unless a change seems advisable to reduce reedy cloth.

As to the best percentage of moisture content for good weaving, the consensus of opinion favored between 7½ and 8 per cent.

"In weaving heavy moleskin, 60x104, 10s/2 warp,

10s filling, what selvage is best for good running work?" was next asked. Mr. Dillard replied that with this construction, and 20s/2 warp, "it was necessary to buy some special balanced twist 30s/3 combed yarn to run in the selvage, as the body of the warp was not strong enough to hold the filling without curling. In addition to this we are running a wire selvage instead of a tape selvage (this takes some of the strain off of the yarn) and we are running this selvage yarn over a block of regular finishing wax just above the drag roll to give it a little added strength. With this set-up we have not experienced any great difficulty in weaving this fabric."

Walter Whisnant, overseer weaving, Callaway Mills, Manchester, Ga., said with 14s/2 warp, 14s filling, they draw the selvage like the body of the warp, only doubling six threads in the selvage, and do not have any trouble. This is on 116 pick goods.

Installing Old Eyes in New Shuttles.

"Is it practical for a mill to buy shuttles without eyes and install eyes from old shuttles?" was next asked. Henry Robinson, assistant superintendent, Columbus (Ga.) Mfg. Co., stated that they are buying shuttles without eyes and having the loom fixers install old eyes in them. Mr. Senn said he had not been able to get the eyes to fit in doing this. Several other men said they buy the shuttle blanks and send the eyes to the shuttle manufacturers to install, and that this is satisfactory.

Loom Stoppage Figures.

The next question asked for figures of loom stoppage per hour. It was realized that this is dependent on details of construction, etc., but it was concluded that an average of .4 stop per loom per hour would be a very good average. One figure presented on 68x72, 64x64, 45- to 100-inch goods, was .86; another, on 36-inch 64x60, 30s warp, was .75 to .85. Mr. Rogers said his ran from a low extreme of .06 to .72, and Mr. Elliott, on 52x48, reported .26 (no feeler) to .74 with feeler.

Next the chairman asked what percentage of loom stops come from warp stops, and what percentage from filling. One man, on 17½s warp and 25s filling, reported 75 per cent warp and 25 per cent filling; Mr. Dillard said on 14s warp and 15s filling, 70 per cent were warp stops and 30 per cent filling stops. V. J. Thompson reported 65 per cent filling stops and 35 per cent warp stops, using feelers, this average being reported by several others.

Larger or Smaller Sections for Fixers?

"Which is the best method: to have a smaller amount of looms per section, with the loom fixer doing his own tying on of warps and smashing, etc., or to have a larger number of looms per section and have a smash hand and a man to tie on warps?" This was the next question.

It seemed to be generally agreed among those present that under practically no conditions should the fixer be required to do his own smashing. Excepting this feature, there was a difference of opinion on the matter. W. D. Massey finds it advantageous to give a fixer a larger number of looms, providing him with warp men, so as to have the skilled work done by skilled men, leaving the unskilled work to less skilled operatives. He explained, however, that the loom fixer looks over the looms and starts them up. Mr. Elliott also favors this method, as does Mr. Thompson.

Mr. Rogers pointed out that the actual tying of the warps requires only a few minutes, and that it is his opinion that the harness settings, etc., should be inspected by the loom fixer every time the warp is tied in, and that he certainly should go to every loom that frequently.

Better Quality Cloth with High Speed Warping.

"Do you get better quality and quantity of cloth where your yarn is run on automatic spooling and warping or high speed winding and warping than you did with old spooling and warping; if so, why?" was the next question. Those answering all replied affirmatively; Mr. Massey said the new warper makes the warps run straighter, and Mr. Rogers said that "we notice one thing in particular. Our Barber-Colman practically eliminated kinks and we have a very small percentage of our stops caused by kinks. We used to run from 25 to 33 per cent stoppage due to kinks and now we do not have over two per cent from this cause."

G. S. ELLIOTT, superintendent of Pacolet Mfg. Co., New Holland, Ga., who was elected vice general chairman . . . .

Better Weaving from Long Draft Spinning.

Those using long draft spinning were asked, *"Does your weaving run better since your yarn is being made on long draft spinning than it did before?"* Mr. Zachry and Mr. Rogers of Fulton Bag reported making eight warps of yarn made on regular draft, and eight made from long draft yarn, and that the latter ran in the weave room with 40 per cent less stops. Both warps were made with automatic spoolers and high speed warpers. Mr. Rogers added that his long draft yarn made from the same roving showed up from 10 to 12 per cent higher in breaking strength in the single yarn, but that the woven cloth did not maintain this increased strength. Mr. Massey reported better weaving from long draft yarn, and consistently increased strength in both single yarn and woven cloth. J. C. Edwards, superintendent, Martha Mills, Thomaston, Ga., explained that they did not strive for high single yarn strength, since their yarns are twisted and cabled, but stated that "there is no question that if you keep within reasonable bounds on long draft you will make better yarn with it than with the regular draft."

A question was asked about the use of tapioca starch in size mixes. G. W. Medley, of Harmony Grove Mills, stated that they are just now experimenting with it, and that they run it the same as corn starch. In answer to a question he said the different lots of tapioca do not come as uniformly as does corn starch. W. D. Massey said he has been using tapioca starch exclusively for five months, using some less tapioca in his mix than he used of corn starch.

The last question asked for experiences with pickers, check straps, etc., made of canvass and impregnated with rubber. Mr. Willingham reported a previous experience as being unsatisfactory, on check straps, and pickers, but the manufacturers have since reported that the first ones were made too hard and that an improved material was used on some with which he is now experimenting.

Following the practical discussion, Mr. Rogers introduced C. A. Jones, recently appointed director of Tech's textile department. This concluded the morning session, and after the usual "Dutch" luncheon, the meeting was resumed in an afternoon session, for discussion of mill mechanical subjects, led by Comer Turley, mechanical superintendent, Pepperell Mfg. Co., Lindale, Ga.

Invitation to Readers.

YOU are cordially invited to discuss your experiences on any of the subjects covered in the meeting which is reported here. Other ideas on these topics other than reported will be useful to all. Send your communications to our "How Other Men Manage" department.—The Editor . . . .

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Mechanical Discussion.

The first question was as to the comparative advantages in the use of coal and oil. It was concluded that this was a matter dependent upon the relative cost of the fuels, taking the savings effected in upkeep and labor by the use of oil into consideration. Only one mill in the state was reported as using oil for fuel.

The second question asked, *"As a general rule, what parts are best made in your mill machine shop, and what parts are best bought from machinery and supply houses?"* The discussion on this developed that it appears to depend largely on the equipment of the mill shop as to just what parts and how many different kinds can be made by the mill. Practically everyone discussing the question stated that he makes all gears, studs and similar parts, but so far as machinery parts are concerned, it appeared that the cost of equipment for making them satisfactorily must be considered. Mr. Rogers pointed out that "In certain instances, malleable castings are mighty good. Where a casting projects and is likely to get run into, you can save a lot of money by using malleable castings on them to begin with.

Turning Slubber Spindles Down.

The practicability of turning worn slubber spindles down to intermediate and speeder spindles was next discussed. Mr. Rogers said he had first tried doing this in the mill shop, but that the result was not satisfactory, but that he is securing satisfactory results by having the work done in an outside shop equipped for handling it. He said the turned-down spindles are entirely satisfactory, equal to new spindles.

"What methods are best for issuing shop orders and their follow-up, through to department charge?" was the next question.

"We have a small pad that the overseers and others authorized to issue orders carry in their pocket," answered J. C. Edwards of Martha Mill. "These orders are made out in duplicate. Both copies go to the shop with the job. When the job is finished, the original copy goes to the accounting department (after coming to my desk for checking) and the other copy goes back to the department overseer with the job. On each copy are shown the hours required, the base rate, and the total cost of material and labor. The accounting department extends this cost to the maintenance cost of the proper department, and sends the original copy back to the master mechanic." Mr. Edwards explained that the feature of sending a carbon copy with full information back to the department overseer gives him an opportunity of knowing the cost of the job and determining whether it is correct. P. L. Lindsey, Exposition Cotton Mills, said he uses practically the same system except that he does not send a copy back to the department issuing the order. Several men reported issuing orders for parts through the supply department, the mechanical department later replacing the part which is requisitioned out.

Re-Necking Steel Rolls.

"What is the best method of re-necking steel rolls and hardening necks? What kind of steel is used, and what is the average time required per joint?" was the next question.

Mr. Turley said that he uses his discarded steel rolls for the purpose, turning off the fluted portion and making the necks from the old roll, thus getting the same neck as on a new roll. He said he has a large supply of old rolls as a result of a recent installation of new spinning frames, and that if he were buying material for the purpose he would doubtless use a high carbon steel.

J. L. King stated that with his system of re-necking rolls, he uses a round neck straight through, as "this is the only way to get a true round neck." E. G. Andrews uses a square joint, and uses a three-lip drill for drilling out the square.

Butt-Welding on Spindle Tops.

Mr. Cheek asked if in hardening the necks, anyone has trouble with them coming loose. Mr. Turley said that he does not harden the necks, using a brass lining. As to the time required, Mr. Turley said that he had once done this work and that he did 14 joints and two ends in ten hours, and considered this to be a good day's work. Mr. Rogers reported a time of around 1 hour per joint.

"Has anybody tried doing butt-welding, and if so, on what jobs is it being done successfully?" the next question, developed that no mills are using this proc-

ess. E. G. Andrews, of Southeastern Machine Co., explained that they butt-weld in re-topping spindles. Mr. Edwards asked how much it would cost to equip his shop for butt-welding, with electric welders and converters already installed, and Mr. Andrews replied that the cost would be in the neighborhood of $8,000. R. B. Betts, mechanical engineer, Columbus, (Ga.) Mfg. Co., asked Mr. Andrews if in butt-welding spindle tops it was necessary to have the two pieces of the same size. Mr. Andrews replied that they were put together on centers, and that while they should be of as near the same size as practical, it was possible to have one a little larger than the other.

"What method is used of keeping up with broken parts and checking by superintendent and overseers?" was next asked. One man reported that they issue a new or repaired part for a broken one, and charge the department 50 per cent of the cost of a new part. Mr. Asbelle, of Commerce, reported that the section man takes the broken part to the supply room with an order and the new part is issued; and that it is up to the overseer to determine whether a new part is required. All broken parts are inspected regularly by the overseers, and those that are reclaimable are laid aside for repairing, and the others put in junk. He said that on any piece costing less than 50 cents new, he does not attempt to repair it. Mr. Rogers, Mr. Turley and others, however, disagreed, explaining that these small jobs could be saved up and repaired at odd times when the welder or other equipment had been put into operating condition for a larger job.

Mr. Turley asked whether those present weld crankshafts, and added that he does it—as well as most of his steel jobs—electrically. "We actually are going to pay for the equipment in the saving on gas and oxygen," he said. "It costs us about one-third to do these jobs electrically. We do not make any new sand rolls; we build up on the journals of our old ones when they wear."

J. C. Edwards here called attention to the value of attending the welding demonstrations staged regularly at Georgia Tech, declaring that a trip to these demonstrations is well worth the expense to the mill.

Methods of building roving trucks were next discussed. Mr. Turley said he builds his with a slatted bottom, made of ⅜-inch cold rolled steel, 1½-inch pitch. On the truck he uses 16-gauge iron, with ¼x1¼-inch bands, and 3/16x1½-inch angle iron, riveted on two opposite corners. He puts a solid bottom in filling trucks. He uses black iron in order that he can paint it, for appearance, and shellacks the insides of the trucks. He said the shellac stands up satisfactorily in the filling trucks where the filling is conditioned.

The final question on the list was with regard to building maintenance, scrubbing floors, etc. Mr. Turley said they had tried floor scrubbing machines without success because of uneven floors; Mr. Edwards uses them satisfactorily. Mr. Turley said they have begun doing their scrubbing at night, with great success, as this eliminates wet floors while the mill is operating, thus reducing accidents and also saving the floors. He said his system allows the scrubbers to get over the entire mill about every two weeks, covering the main alleys, etc., once a week.

Plain or Ball Bearing Motors.

Having concluded the prepared questionnaire, Mr. Turley asked for discussion as to preferences between ball bearing or sleeve or waste packed bearing motors. Mr. Edwards said, "We have both, and we prefer the roller bearing type over either the ball bearing or the sleeve bearing." Mr. Turley said that he had tried ball bearing motors, but does not like them; that it is too much trouble to have to take them out of the mill to clean, to keep a stock of ball bearings, etc.; and that he has had trouble with grease pitting the bearings. Mr. Edwards said he does not clean his ball bearing motors, as he can see no point in it, and Mr. Turley said he preferred doing it. Mr. Edwards said he has no trouble with grease in the bearings; and it appeared that this is largely a matter of the type of grease used. Mr. Edwards said he has 600 motors that have been running three years day and night, and that he has not cleaned them. A. G. Laughridge advised that in a Georgia mill there is a ball bearing on a picker which has been running for nine years sealed up; that it was originally greased with white vaseline and has not been greased since. R. A. Field, Jr., asked about lubricating ball bearing top rolls on slubbers; Mr. Edwards replied that this is necessary only when rolls are replaced. Mr. Field explained that if the roll is equipped with calf skin it will run longer, so that perhaps the bearing should be oiled more frequently.

This concluded the discussion, and the meeting was adjourned. The next meeting of the organization, to discuss carding and spinning, will be held in March 1933.

Following the elections of officers last month, the following are officials: A. Lehmann, Jr., general chairman; C. S. Elliott, vice general chairman. Members of executive committee, with expiration dates of their terms, are: A. E. Massey, March 1933; John B. Jones, September 1933; R. D. Harvey, March 1934; J. C. Edwards, September 1934; and D. R. Senn, March 1935.

Sinclair Orders Cotton for Service Station Uniforms.

Order for 115,000 yards of herringbone twill has been placed with the Pepperell Manufacturing Co., by the Sinclair Refining Co., according to information recently furnished at the oil company's headquarters, 45 Nassau St., New York City. The material will be fabricated into uniforms for all Sinclair service station attendants. Placement of this order resulted from a larger dealer sales organization attracted by an increasing public demand for the new Sinclair Regular gasoline introduced a few months ago, it is announced.

It is stated that 42,000 pounds of cotton will be needed to manufacture this material. Specifications call for a portion of the yardage to be 28-inch—2.15 yard finished special Sinclair Green for coveralls, coats, pants and caps, the balance to be 36-inch—2.85 yard sand color twill for shirts. Indanthrene dye will be used. Shirts, coats and coveralls will have the Sinclair trademark embroidered on the backs, and the Sinclair Opaline motor oil trademark on the left breast pocket.

CURRENT TOPICS

Talk of the Month.

LATE SEPTEMBER brought a substantial movement of buying among distributors of textiles all ofer the country, instigated very largely by the rise of commodity prices, the cotton belt of the South furnishing one notable example. The rise of cotton itself during the month of August, creating new strength in textile fabrics, gave the first impetus to the upward movement of sales and prices. A pause in the advance of raw cotton on the somewhat disappointing Government report of September 8 was accepted by the goods trade as favorable to the extent that it gave manufacturers and selling agents an opportunity to size up their position after a movement of buying which had possibilities of danger in overreaching itself, even though it was figured in the summer that distributors needed enough goods to keep mills going four months.

The General Situation in Textile Markets.

Meantime, the situation developed a distinct change in such fundamentals as prices, buying policy, employment by the mills; even wages and rehabilitation of plants. Hand-to-mouth practices prevailed so long that misgivings were aroused as to whether the cotton industry ever would emerge therefrom. Now it appears that a sellers' market is likely to see a trend back toward the old normal in this respect; at least a modified return of forward buying on the old method. The case is the stronger because the evidence not only comes from the goods market, but the rising tide of prices for raw materials also has brought some semblance of the old days when buyers could see advantage in speculative operations against prospective requirements and not wait for immediate needs to be seen. As stated recently by L. U. Edgeheill, vice-president of Draper & Company, in charge of sales for the National Wool Marketing Corporation, "the policy of buying from hand to mouth has been discarded".

Cotton manufacture, as is well known, reached an extremely low level early in the summer and employment of course suffered severely. Thus it is gratifying that the industry has been contributing its part to the general relief from unemployment. The Commercial Investment Trust Corporation announced late on August 23 and 95 textile mills of various kinds reporting showed a net additional number of persons employed of 4,061 between July 1 and that date, a 20 per cent increase. Statistics of the further expansion are not available at the moment, but continual reports from day to day and week to week are convincing of broad gains in the textile field generally. A notable feature of the August textile business was the estimated turnover of the largest poundage of rayon yarns on record for one month.

Contingent upon the upward movement of other lines of business as hoped, the textile industries are in the vanguard of progress toward a healthy state of things. Spotty reports are found of wage adjustments, though no important movement has been found in this matter. In another fundamental, the matter of modernizing plants, more is doing. Replacement of old machinery has begun to assume importance, now that textile manufacturers see daylight ahead.

Leaders of the cotton industry continually stress the need of caution toward the future through the period of considerable excitement, due to a movement the more striking because of the contrast with several years of dearth in business. It was evident in the early part of September that an undercurrent of suspicion prevailed concerning the maintenance of conservative schedules by the usual minority group of mills that jeopardize the good attainable by unanimously careful operation. Point was given to the suspicion by reports that bankers had connections with some cotton mills to

Machinery Investments.

THE depression has furnished a fine opportunity for textile mill treasurers to study various types of economies that can be perfected. Among those that have been discovered is the economy of new machinery. There is a strong feeling that when the revival is well assured many mills that have been suffering severely because of old machinery will suffer from this handicap no longer.

It has been estimated by experts in mill engineering that it is now possible to build and equip a 50,000-spindle cotton mill for print cloths that will produce goods from 10 to 12½ per cent cheaper than half of the existing print cloth mills in the country today.

This statement is accentuated by the fact that a cloth merchant recently indicated that the costs of production in print cloth mills today vary as much as 3 cents per pound, which is substantially in excess of 12½ per cent.

It is a well known fact that during the last six and one-half years millions of spindles have become obsolete and have been destroyed. There are also many others that are very inefficient because of the wear and tear the day and night run with abnormal speeds that have been given to this old machinery made to run at a much slower speed.

In practically every department from the opening room to the cloth room improvements in machinery have been made that increase quality and quantity, and at the same time reduce production cost.

Competition on a rising market will not be lessened any more than it is on this depressed market, because potential production capacity is still in excess of demand. Therefore, the mills that expect to be the most successful will be the best equipped mills.

Many people seem to think that the credit standing of the mills in the future will, in a large measure, be determined by the type of equipment in the mill, which, in turn, means its production capacity influencing cost.

The textile industry is a fundamental industry and regardless of changes that may take place, it will always occupy an important part in the progress and development of our industrial life. The far-seeing mill treasurer will begin now to make permanent plans for the period of prosperity which is sure to follow and one of his preparations will be to modernize his plant with the best of machinery.

which loans had been made on the basis that curtailment programs would be maintained, but that renewals of notes would not be forthcoming because of defections from the operating schedules to which they were supposed to hold. The industry at best is at the beginning of a return toward prosperity and caution should be the watchword.

As stated by C. T. Revere, observer for Munds, Winslow & Potter of New York, trade recovery is the basis of the future. Writing of the situation after "the speculative shock of September 8", when the expectations of a crop disaster were rudely shattered, he found the trade recovery apparently under way, but still subject to two tests. One of these was the extent to which the previous gains might be interrupted by the shock mentioned and the other the response that would be made by consumer demand for cotton textile fabrics through retail channels. The cotton industry still needed evidence "not only of requirements for goods huge and practically insatiable," but of a public "both ready and willing to translate these requirements into actual purchases".

New England Mill Situation.

NEW ENGLAND cotton mills this fall have benefited from a variety of conditions which have given them a fair share of the rising volume of business for the industry at large in the country. Up to the middle of September there was a constant flow of reports showing mills opening and adding hundreds of workers individually, making thousands in the aggregate, with signs favorable for the further expansion of operations. Naturally the double upset to the raw cotton situation on September 8 and September 12 caused some temporary uncertainty and this section with the rest of the industry found itself dependent once more upon the development of the broad economic situation for its hopes of continued progress toward a normal position. For the fact never was overlooked that business even on an expanding basis was far from normal, because of the low depths to which it had descended.

Fall began in this district with textiles at the forefront of a general pick-up in the leading industries, such as shoes and leather. The general broadening of activity was one of the encouraging developments, since in the last analysis each group is dependent upon all the others. In the cotton industry, the steady expansion in employment was based upon advancing values in raw material, yarns and fabrics, the rising trend instigating buying ahead by wholesale and retail distributors. Percales, for example, were estimated to have risen by September 7 an aggregate of 27 per cent from the low point of August.

It was noted that resumption of activity in the textile centers of the Blackstone Valley, original district of the country in the cotton industry, caused an increase of 0.66 per cent for the week ended September 4, over the same period of 1931, in the output of electric power by the Eastern Utility Associates, in contrast with a decrease of 10.4 per cent for the country as a whole in the same period. This was the first week since early in February when the output of the Associates had exceeded the corresponding 1931 period. In the week ended July 17, moreover, the deficit for 1932 compared with 1931 was 21 per cent.

Fall River, one-time leading center of cotton manufacture, has had a decidedly encouraging movement upward this fall. That center participated to a much increased extent in the August movement estimated to have exceeded 2,000,000 pieces or 120,000,000 yards. Stocks on hand were well cleaned out, according to the local paper, and many mills of the city sold their production to the end of the calendar year. This business contributed to a healthy increase in employment and the payrolls of the textile mills by this time presumably have been raised well over fifty per cent of what they were the first of August.

In the fine goods center of New Bedford, the mills have shared in the same upward movement. Significant of the changing situation in a community largely dependent upon textile manufacture, it was reported before the first of September that many names had been dropped from the lists of the Public Welfare Department as no longer needing assistance and a continuation of the shrinkage was in sight. As a case in the advance of employment, one announcement was the taking on of 1,100 idle workers by units of the Nashawena Mills and the New Bedford Rayon Corporation. The New England Council in mid-September made a compilation of reports of improving business in the northeastern section of the country showing that these developments in New Bedford and in Fall River were only outstanding features of a widespread advance in textile manufacture for the whole district.

Advances in value of cotton inventories are figuring in the calculations of mills these days. Just previous to the September break, manufacturers in Maine were pointing out that the appreciation in inventories alone was equal to the market prices of some textile stocks, according to the Portland *Press-Herald*, with other current assets and plant investment thrown in for good measure. A better feeling toward some textile mill stocks has been evident to a moderate extent this fall.

Red Cross Cotton.

THE 500,000 bales of cotton allocated from the Federal Farm Board for the use of the Red Cross in alleviating distress among the needy of the nation is being rapidly distributed.

The first distributions are cotton exchanged for gingham, muslin, prints, shirtings and other cotton materials to be made into men's, women's and children's clothing by voluntary workers. At the present time requests have come in from about 1,000 chapters asking for approximately 15,000,000 yards of materials.

Aside from the great humanitarian overture of these appropriations of cotton, several other splendid results are expected, one of which is that it will relieve the Farm Board of 500,000 bales, thereby lessening the threat of the Farm Board's selling cotton in the open market, which would have a tendency to depress an already low market.

A second benefit is expected in that it will take out of the market a production equal to about five week's operation of the mills, thereby disgorging the

avenues of distribution, which, because of depressed conditions, have become congested.

A third influence is that it will have a tendency to give confidence to cotton commodity prices. The distribution of the benefits of this cotton to the various chapters is taking place either in the distribution of cloth requirements, as indicated by the chapters, or in the exchange of the cotton with mills in areas which certain chapters serve, which cotton will be made up into the requirements needed, or exchanged locally for materials.

In either case, however, the market results are the same, in that congestion is relieved in commodities, or in commodities to be manufactured.

Patience Required.

WITH the passing of every depression there are always many vexing problems that arise in industrial organizations. Capital stock in many cases has been depleted, salaries have been slashed and wages have been reduced. With the upturn in commodity prices, there is generally an unusual demand; there is generally a scarcity of commodities at the advanced prices. This fact necessitates increased operating schedules and ofttimes schedules operating under pressure and without the former amount of help that was used prior to the dull period.

It requires an unusual amount of judgment and commonsense to maintain the proper poise. Pressure and over-anxiety to meet market conditions and to recoup depleted resources some times have a tendency to put not only the management on a wiry edge, but workers in the organization.

Following nearly every period of depression there is more or less unrest of various types. It takes a much longer period than the average public citizen realizes for improved conditions to manifest themselves in a financial way sufficient for wages and salaries to feel that the upturn has come. For this reason alone, unrest and dissatisfaction may occur.

For these reasons, overseers, superintendents and mill managers must realize that miracles cannot be accomplished, that humanity under present conditions is still the same humanity that it has been. They must not expect the impossible, and they must carry this idea over to those who are working in the organization, imbuing them with the idea of reasonableness and justice, educating them to the idea that progress comes slowly and that all will participate in its results in a reasonable course of time.

Cotton's New Appeal.

THE summer season just passed has been notable in the increased use of cotton fabrics for clothing, particularly for mens' clothing.

This fact is attributable to style but intensified by the fact that so much progress has been made in rendering cotton fabrics non-shrinkable.

There has grown up a large division in the textile industry, centering itself in this process. While there are several processes and each claims its merit, as time proceeds, this one deterrent to extended uses will be completely and satisfactorily eliminated.

Now that announcement has been made that wrinkleproofing is ready to assert itself in the cotton-textile industry we may expect a much larger demand for cotton fabrics.

Cotton fabrics that are non-shrinkable and wrinkleproof will have a strong appeal for the general public. The printing and dyeing processes have already written new history in the industry.

Not all that is worth while has yet been discovered. The textile industry has a great future even with present knowledge.

Comment on the Cotton Market

New Orleans, September 14th, 1932.

ALTHOUGH there was improvement in general business during the past month, especially in the cotton textile division, and notwithstanding there being practically no change in the indicated crop, as of September 1st. compared with the outlook, as of August 1st., the cotton market, which scored a further important advance during the last half of August, or up to the 29th., subsequently, except for temporary bulges, developed pronounced weakness, finals for today, compared with one month ago, showing moderately lower. Values, nevertheless, remain much higher than the "lows" of early June, which were the lowest for last season and for many years past.

During the closing days of August and the opening of September the market assumed a reactionary trend, due to the issuance of some early monthly bearish private crop estimates, better crop weather inland, because of the labor troubles in Lancashire, and the desire to realize. Thereafter, or until prior to release of the government's crop estimate on September 8th., values recovered sharply in consequence of some later small private crop estimates, which served to maintain confidence in the belief that the government crop forecast would likely indicate a good decrease compared with crop prospects of the previous month.

As a matter of fact, the official forecast of September 8th. was for a slight increase in the indicated production—pointing to 11,310,000 bales, as of September 1st., versus 11,306,000, as of August 1st., which was a keen disappointment to the trade and occasioned an important decline in the market. Meanwhile the weather was considered favorable for the growing crop, the stock and grain markets developed weakness, liquidation continued, stop loss orders were uncovered on the down grade and there was much of hedge selling, resulting in a further important decline.

GOVERNMENT COMPARATIVES

Bales—	This Season	Last Season	
Acreage for harvest, estimated, acres	36,611 000	40,693.000	(final)
Average condition of crop Sept. 1st.	56.6	68.0	
Production forecast, Sept. 1st.	11,310,000	17,096,000	(final)
Indicated yield per acre, September 1st., lbs.	147.8	201.2	(final)
Ginned to September 1st., bales	865,232	565,753	

Washington's comment, accompanying the September 8th. Bureau crop report, stated, in part: "The yield per acre indicated by condition, with allowance for prospective weevil damage, was 147.8 pounds compared with 149.6 pounds indicated on August 1st. The decline in prospective yield per acre during the month was entirely offset by the fact that abandonment of acreage is estimated to be somewhat below average. In the August 1st. report the crop reporting board used the ten year average of 3.1 per cent abandonment; in the September report the Board used the abandonment of 1.8 per cent indicated by the reports made by crop correspondents as of September 1. During August prospects declined in practically all States in the eastern and central portions of the belt, where weevils have been quite active and weather conditions were mostly unfavorable to the crop. The forecasts for Texas and Oklahoma are considerably above the forecasts of August 1, due largely to favorable moisture conditions in the western portions of these States."

SEASON'S INDICATED WORLD'S SUPPLY OF AMERICAN COTTON, LINT

Bales—	This Season	Last Season	
World's carry-over, August 1st. (Hester)	12,911,000	8,710,000	
Indicated crop, government forecast, Sept. 1st.	11,310,000	17,096,000	(final)
Indicated season's supply, about	24,221,000	25,806,000	
Season's average price of middling, based on 10 markets	(f)	5.89	

Foreign Cotton Crop News.

Washington reports, in part, as follows:

"India—Up to August 1st. there were 13,485,000 acres planted to cotton in India, which was 453,000 acres or 3.3 per cent less than planting to the same date last year, according to estimates of the Department of Statistics of India. The first official estimate of Indian production is expected about December 15.

"Egypt—The Egyptian government has estimated the 1932-33 cotton acreage at 1,135,000 acres, which is 35 per cent less than 1931-32.

"China—On the basis of estimates of the Chinese Mill owners Association, the 1932-33 China cotton crop is now expected by this Bureau to be about 2,500,000 bales of 478 pounds net compared with 1,700,000 bales in 1931-32.

"Russia—Little information is now available on the new crop in Russia, but should the area planned have been planted, the acreage would exceed that of 1931-32 by only 14 per cent. July and August returns state that the 1932-33 crop has gotten off to an even poorer start than last year's crop."

BRITISH BOARD OF TRADE REPORT FOR AUGUST

Year—	1932	1931	1930
Exports of yarn, pounds	9,000,000	10,000,000	10,000,000
Exports of cloth, yards	181,000,000	144,000,000	168,000,000

ASSOCIATION OF COTTON TEXTILE MERCHANTS OF NEW YORK AUGUST STATISTICS

4 weeks—	August 1932	July 1932	August 1931
Production	180,781,000	141,673,000	209,050,000
Sales	510,531,000	222,616,000	167,555,000
Shipments	252,623,000	165,574,000	227,644,000
Stocks	209,407,000	281,249,000	250,855,000
Unfilled orders	485,860,000	227,952,000	217,508,000

August sales of domestic cotton goods were 282.4 per cent of production against 157.1 per cent in July this year and 80.1 in August last year. Shipments were 139.7 per cent of production against 116.9 in July this year and 108.9 in August last year. Stocks at the end of August decreased 25.5 per cent against a decrease of 7.8 per cent in July this year and a decrease in August last year of 6.9 per cent. Unfilled orders end of August increased 113.1 per cent against an increase in July this year of 33.4 and a decrease in August year of 195,282 spindles.

CENSUS REPORT

United States— Bales—	This Season	Last Season
Consumption of lint, August	402,601	425,030
Consumption of linters, August	47,620	61,807
Consumption, including linters, August	450,221	486,837
Mill Stocks, August 31st.	1,090,421	840,783
Stocks in public storage & warehouses, August 31st.	6,547,563	4,426,399
Stocks in mills, pub. stg. & whs., Aug. 31st.	7,637,984	5,267,182
Active spindles during August	22,022,490	25,630,136

Active spindles during July of this year were 19,758,252 compared with 25,825,718 during July last year. August returns show an increase over July this year of 2,264,238 spindles, whereas there was a decrease during August of last year of 195,282 spindles.

TOTAL AVERAGE RAINFALL IN TEXAS, IN INCHES

Year—	1932	1931	1930	1929	Normal
August	3.38	2.04	1.50	0.87	2.44
Nov. to Aug., inclusive	30.02	24.84	21.66	26.43	25.30

Because of so much rain in the interior this season, the average grade of the crop is apt to be lowered, which has tended to harden the basis. As to the season's probable demand and consumption, there has been a good demand from American mills, and August domestic consumption showed a big gain as compared with July of this year, which is encouraging, as are the much larger exports of raw cotton, since August 1st. 770,582 bales against 394,725 for corresponding time last season, Canada not included.

With a smaller indicated world's supply of American for this season than last season, with the domestic textile situation much improved, and since government agencies, it is said, are to withhold a large quantity off the market unless the price advances materially, fundamentals of the situation appear to be much better than they were at this time last season. Advices from American mills are reported to be the most optimistic in several years, showing extremely large sales of goods at improved margins of profit.

The bright spots in industry just now are in textiles and shoes, in which there are indications for continued activity. In the steel department, the outlook appears better since the backlog of the U. S. Steel Corporation gained 3,292 tons in August, and while small, is the first increase in seventeen months. The slight increase in carloadings is encouraging also. The future, however, has in store the uncertainty of the presidential election in November, and as there is the possibility of a change in the administration, such fear may tend to unsettle the business situation somewhat, as in event of a change in government, there may be a change in policy, especially as regards the tariff.

What the Southern Mills are Doing

AT THE receiver's sale of the Shelbyville Mills, Inc., Shelbyville, Tenn., on September 10th, the Hunter Manufacturing & Commission Co., of New York City, selling agents of the mill, bid $249,000 for the property, this being the only bid made.

American Net & Twine Co., Blue Mountain, Ala., will, it is reported, build two additions to its new subsidiary plant. There will be a drying and polishing department and a dyehouse.

The plant of the Avondale Mills, Stevenson, Ala., has purchased A-1 equipment from the H. & B. American Machine Co. Pawtucket, R. I., for converting their picker room to single process.

Avondale Mills, Sylacauga, Ala., is to install a new dyehouse in addition to the one already in use.

Athens Mfg. Co., Athens, Ga., are continuing to change over their spinning room to long draft, it being understood that they recently ordered equipment for changing over about 8,000 additional spindles.

Crystal Springs Bleachery, Chickamauga, Ga., have purchased from H. & B. American Machine Co., equipment for changing their spinning room of approximately 25,000 spindles over to long draft.

It is reported that between 15,000 and 20,000 additional spindles of long draft equipment have been purchased by the Manchester Cotton Mills, Manchester, Ga., from the Whitin Machine Works which it is understood will complete the changing over of the mill to long draft.

The work of changing over the spinning room at the Milstead (Ga.) Manufacturing Co., to long draft is being continued by a recent order placed with the Whitin Machine Works for between 10,000 and 12,000 additional spindles of equipment for changing over.

Saco-Lowell continuous card strippers are being installed at the Newnan Cotton Mills, Newnan, Ga.

Southern Brighton Mills, Shannon, Ga., have changed their picker room to single process by the installation of A-1 equipment furnished by the H. & B. American Machine Co.

New looms are being installed at the Homestead and Spray plants of the Leaksville Woolen Mills, Leaksville, N. C.

Contract for an extension to the Rock Hill Printing & Finishing Co., Rock Hill, S. C., has been let. The addition to

Leadership

● The last few years have witnessed many important changes in the fundamentals of cotton spinning. These changes have had a very far-reaching effect on mill economics, causing radical readjustments in cost structures through the raising of production, and incidentally, of quality standards. Analyzing the developments in machinery which have made this progress possible, we point with pride to our contribution to the recent important improvements which have enabled mills to make better and stronger yarns at lower costs:

Combined Blending and Cleaning Feeders
Synchronized Automatic Control for Opener Rooms
Openers with Beaters Vertically Fed and Grid Enclosed
Air Recirculating System for Opener Rooms and Picker Room
One Process Pickers
Continuous Card Strippers
Controlled Draft Drawing Process
Saco-Lowell Roth Better Drafting System
Steel Ring Rails
Spring Tempered Heat Treated Spindle Blades
Super-Capacity Oil Bases
High Speed Twister Spindles
High Speed Lubricated Twister Rings
Dual-Spindle Twisters
High Speed Warpers

●

SACO-LOWELL SHOPS

147 MILK STREET, BOSTON, MASS.

CHARLOTTE, N. C.
SPARTANBURG, S. C.
ATLANTA, GA.

the print room will be 33x158 feet, and a boiler room addition will be 36x53 feet.

H. & B. American Machine Co. have installed their A-1 equipment in the Rocky Mount Mills, Rocky Mount, N. C., for converting the picker room to single process.

It is understood that Arista Mills Co., Winston-Salem, N. C., have purchased about 10,000 spindles of new spinning of the long draft type from Whitin Machine Works.

The No. 2 spinning mill of the P. H. Hanes Knitting Co., Winston-Salem, N. C., has been changed over to single process equipment in the picker room by the installation of H. & B. A-1 equipment.

Standard-Coosa-Thatcher Co., Chattanooga, Tenn., have purchased ten cone winders from Foster Machine Co., Westfield, Mass., for installation in their mercerizing department. This company also recently placed order for 10 high speed cone winders and 11 magazine cone creels, with the Universal Winding Company, this equipment to be installed in the spinning plants of Standard-Coosa-Thatcher Company, at Chattanooga, and Piedmont, Ala.

United Throwing Co., Burlington, N. C., one of the J. Spencer Love group of mills, is installing 6,100 Atwood spindles for rayon crepe. When this installation is completed the company will have 16,100 Atwood spindles for crepe twisting, the largest unit of its type in the South.

Eureka Cotton Mills, Plant No. 1, Chester, S. C., is erecting a new office building.

Riverdale Mills, Enoree, S. C., and the Monarch Mills, Lockhart, S. C., are equipping their roving frames with Stewart compounds and chain drives manufactured by Precision Gear and Machine Co., Gastonia, N. C.

Habersham Mills, Habersham, Ga., recently purchased a high speed cone winder from Universal Winding Co., and a high speed ball warper with magazine cone creel from Cocker Machine and Foundry Co., Gastonia, N. C.

Entwistle Mfg. Co., Rockingham, N. C., will, it is reported, erect an additional building, 125x500 feet, for housing additional equipment.

Eastside Mfg. Co., Shelby, N. C., and Phenix Mills Co., Kings Mountain, N. C., have been re-organized into the Eton Mills Co., with J. R. Dover as president, it is reported.

W. W. Glenn, Edgar Love, and C. R. Jones have incorporated the Glen Mfg. Co., to operate the Melville Mfg. Co., Lincolnton, N. C.

Russell Mfg. Co., Alexander City, Ala., is building a new bleachery, dye and finishing building. Finishing apparatus is being furnished by Textile Finishing Machine Co., and motors and control for range drives by Reliance Electric & Engineering Co.

A. K. Adams & Co., Atlanta, Ga., have the contract for a 25x380 foot addition to Plant No. 3, Erwin Cotton Mills Co., Cooleemee, N. C. J. E. Sirrine & Co., Greenville, are the engineers.

Impetus to Use of Cotton Coverings.

New impetus to the growing use of cotton baling as covering for shipments of yarns and piece goods is anticipated from the announcement that all common carriers have sanctioned this use of cotton under the same rate classifications as other baling materials. Effective September 20th, 1932, according to the Cotton-Textile Institute, New York City, railroads in all parts of the United States will accept at the usual rates shipments baled in cotton for delivery to any destination on their lines. This arrangement by all roads completes the initial action taken by various leading carriers after tests had demonstrated cotton's success as a baling material.

Under the revisions effective on all roads in September, bales and rolls of cotton yarn and cotton piece goods will be acceptable for freight shipment to any point in the country when covered with 8 oz. cotton cloth alone, or with 3½ to 4½ oz. cotton cloth when reinforced by an inner wrap of paper. A number of mills have been making shipments in cotton baling since the latter part of 1931 over southern lines which had given approval to cotton. In that connection an official of the Southern Railway has informed the Institute that some mills are now forwarding from 40 to 75 per cent of their shipments in cotton baling and that recently there has been a general increase over the system in shipments of cotton piece goods baled in cotton. Railroad inspection of the cotton coverings indicate their satisfactory service in this use.

Rigid tests were made by railroad freight traffic departments before the rate equalization was granted. Upwards of a score of fabrics were submitted by mills in co-operation with the Institute and these were rated in accordance with the results of the test. A number of fabrics were approved as baling material for packages weighing 300 pounds and over, others were rated as acceptable for shipments up to 300 pounds, and a third group for up to 100 pounds.

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Metropolitan Booklet on Foremen's Safety Conferences.

Because industry generally recognizes that employee accidents cause unnecessary suffering among the victims and results in inefficiency and expense for the company, a large number of industrial organizations are convinced that it is the responsibility of management to take every possible step to prevent accidents which result in personal injury and property loss. In accomplishing this end effectively, experience over a long period has proved that the active interest and leadership of foremen are essential.

"Foremen's Safety Conferences" is the title of a new publication issued by the policy holders service bureau of the Metropolitan Life Insurance Company, 1 Madison Avenue, New York City. It represents one method which is being used rather extensively to develop safety interest among foremen and others in supervisory positions. The report offers suggested programs for a series of seven informal conferences to discuss the various phases of safety work, these meetings being presided over by some such representative of the management as the works manager, the general superintendent, or the director of safety. The programs, which are confined to the fundamental principles of safety work as applied to all types of industry, were developed following a review of the activities of a number of industrial organizations in the United States. It is announced that a limited number of copies of the booklets are available for distribution to manufacturing executives, safety engineers and others interested in this phase of accident prevention.

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Lubriplate Opens Philadelphia Office.

Lubriplate Corporation, Chrysler Building, New York City, have recently opened an office at 600 South Delaware Avenue, Philadelphia, Pa., which is in charge of Alfred S. Otton. This company are the producers and distributors of Lubriplate, a new product described on page 42 of the September issue of COTTON as being a white color grease which offsets wear on bearings by depositing upon metal wearing surfaces a fine, smooth, and tenacious coat or plating of zinc.

GOODYEAR *uses* COTTON

GOODYEAR increases the consumption of cotton by using large quantities of cotton in Goodyear belting, hose and other products.

And Goodyear helps reduce operating costs in textile mills by supplying rubber belting and hose scientifically designed, properly constructed and accurately applied to the duties these products must perform.

Take, for example, the special design and construction of Goodyear COMPASS (Cord) Endless and Goodyear THOR Belt, seamless. In them you will find as in no other belting the very qualities of *minimum stretch, maximum power,* and *protected edges* that mean more trouble-free service and more economical service for you.

These and other Goodyear Belts of special construction for cards, frames, slubbers, spoolers, looms, slashers and breakers, pickers, tappers, twisters and other textile mill drives, are specified in their proper places by the G.T.M.—Goodyear Technical Man.

The G.T.M. may have some money ideas for you. Why not write to Goodyear, Akron, Ohio, or Los Angeles, California, and ask him to call?

TUNE IN:

Goodyear invites you to hear the Revelers Quartet, Goodyear Concert - Dance Orchestra and a feature guest artist every Wednesday night, over N. B. C. Red Network, WEAF and Associated Stations.

THE GREATEST NAME IN RUBBER

GOODYEAR

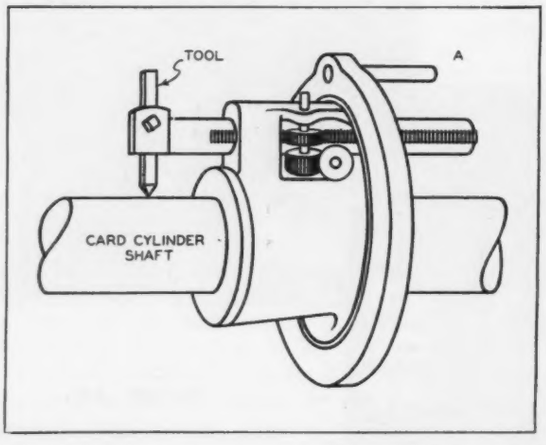
TEXTILE BELTING

New Textile Equipment and Publications

New Machine for Turning Down Shafts of Card Cylinders.

A machine for re-turning or turning down the shafts on the end of card cylinders, which performs this work without the removal of the cylinder from the machine, has been developed and is being marketed by C. E. Marsh, 1032 Hemphill Ave., N. W., Atlanta, Ga.

The device, shown in the accompanying illustration, consists of a double cylinder having a tapered bearing to compensate for wear. The inside cylinder is fitted with collets which will fit shafting from 1½-inch to 3-inch diameter; the collets fit onto the end of the shaft of the cylinder and are



clamped central with the original center of the shaft in the manner used in a turret lathe. This, it is pointed out, insures that the turning of the shaft will be done from the exact original center of the shaft.

The outside cylinder of the device revolves on the inside cylinder, and is equipped with a tool bar and head having an automatic feed which will turn or true the shaft for a distance of seven inches. The machine may be driven by a ½-inch electric drill connected at *A* in sketch. The outside cylinder and tool arm carrying the cutting tool revolves around the card cylinder shaft, the automatic feed giving the tool a transverse movement from one end of the cylinder bearing to the other; means are provided for returning the tool to the starting point.

It is only necessary to remove the pulleys from the end of the shaft and fasten the truing device on the end of the shaft. It is explained that the machine is but 13 inches in length overall, and its cylinders require only about the same portion of space on the shaft that the pulleys occupy, so that the machine will turn or true the bearing portion of the shaft for a distance of seven inches. The machine is portable, weighing only 40 pounds, and it is not necessary to move the cylinder from the card to accomplish the truing of the shaft. A jack support is furnished as regular equipment with the device to support the cylinder after the end bearing is removed.

The time required to re-turn or true a cylinder shaft, after removing the pulleys, is 10 minutes for one cutting and 20 minutes for two cuttings. Mr. Marsh states the machine will do either end of a card shaft, two cuttings, in 20 minutes, plus the time required to remove the pulleys from the end of the shafts.

After the shafts have been re-turned, the same brass bearings can be tinned and babbitted, as is done on the connecting rod of an automobile, then rebored for additional service.

The machines are built in two models. Style A, which is the one shown herewith, slips over the end of the shaft; Model B is built in halves and is split to go over a shaft between shoulders or collars. Mr. Marsh points out that the device may be used on other emergency jobs in a mill, in addition to turning down card cylinder shafts.

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Booklet on Water Softening Applied to Boiler Feed Water.

"No Scale, No Sludge, No Mud—The application of Zeolite water softeners to the treatment of boiler feed water", is the title of a 36-page booklet just published by The Permutit Company, 440 Fourth Avenue, New York City. It is illustrated with photographs and diagrams, and contains tabulated data, conversion tables, factors, reactions, etc.

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New System and Service of Re-Necking Steel Rolls.

Atlanta Textile Machine Works, 471 Tenth St., N. W., Atlanta, Ga., are operating the King system of re-necking and assembling textile steel drawing rolls. J. L. King, originator of this system, is the manager of the plant.

The King system, it is explained, employs an alloy steel heat-treated, case-hardened and ground journal or neck, of a type to suit every kind and size of rolls. The necks, it is stated, "are practically indestructible, and the case-hardening makes a surface which only a grinding wheel will scratch." The company describes the method:

"The rolls are prepared in the shop to receive the heat-treated necks; a round hole is put into each end of every section; these holes are exactly in the center of the roll and in alignment with the body of the roll, not varying more than .0002 inch in diameter. This makes every section interchangeable with others using the same size neck. Every section of roll is straightened, refluted, sized and polished; then they are assembled.

"The necks are put in by means of a machine especially designed for the purpose, the sections being fed into the machine one section at a time, the assembled roll passing out at the opposite end of the machine."

This company assembles all drawing frame rolls complete at the shop; spinning and fly frame rolls are assembled in eight to ten-foot sections, packed in special boxes, and then installed by an erecting crew.

The company describes this construction as making "what amounts to a one-piece roll", for which the following advantages are claimed: The joints, being the strongest part of the roll, "stay put", with no loose joints, backlash or pushing out against the stands; they require less lubrication and attention, etc.

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Electric Steaming Oven for Setting Yarn Twists.

Lydon Brothers, 229 Colden St., Jersey City, N. J., manufacturers of the Lydon electric steaming oven for setting yarn twists, have appointed C. B. Rogers, 1000 Peachtree Street, Atlanta, Ga., as southern representative. The company states that this adaptation of its patented air recirculation oven, is for use in the setting of twist in silk and rayon yarn. The advantages claimed are: A finer quality of silk, perfectly set, no over heating, no baking; uniformity; no spotting due to air circulation, automatic temperature and

HAVE YOU CONSIDERED THE QUESTION of High Draft Spinning, which, put more scientifically, means MORE PERFECT FIBRE CONTROL? Every spinner must eventually adopt it.

• H & B's System is of the simplest description, yet attains all the advantages that may be claimed by other more costly systems now on the market.

• Why not tackle the job right now? Visit our booth, Section No. 130, Southern Textile Exposition, Greenville, S. C., Oct. 17 to 22, 1932, and let us show you how to convert your Spinning Frames with very little alteration to existing constructional detail.

H & B AMERICAN MACHINE CO.

PAWTUCKET, RHODE ISLAND

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ATLANTA OFFICE

815 THE CITIZENS & SOUTHERN NAT'L BANK BUILDING

humidity control eliminating condensation; faster operation, shorter operating cycle; and elimination of the use of the steam boiler during summer months. It is stated that hosiery tram four-thread 13/15 denier, 18 turns, can be set in from 30 to 45 minutes, with crepe being handled in from 45 to 75 minutes, depending upon the twist, denier and traverse.

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Supply of "Popular Textile Chemistry" Exhausted.

Kali Manufacturing Co., 1410 North Front St., Philadelphia, Pa., have announced that the supply of "Popular Textile Chemistry", representing a series of articles by their president, James A. Branegan, reprinted from original publication in COTTON, is exhausted, and that a new and revised edition is being prepared. Copies of the new edition will be supplied those who have requested copies of the booklet, when it is ready.

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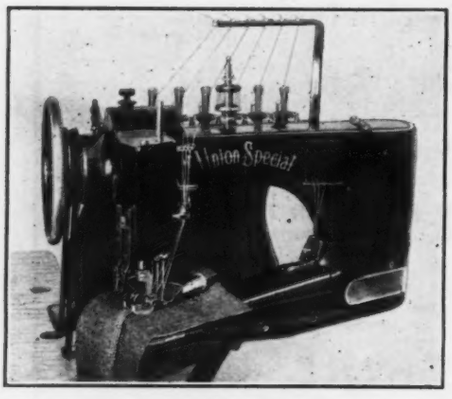
Union Special Develops New Felling Machine for Work Garment Fabrics.

Union Special Machine Co., Chicago, Ill., announce the development of a new sewing machine for triple stitch feed-off-the-arm felling work on work garments. The outstanding mechanical feature of the machine, which has been designated as Style 35800 R, is its "tractor type" feed, which is described as being suggestive of the endless



New Felling Machine.

crawler type of tractor in the manner in which it rides over thick seams at full operating speed.

The upper part of the feeding mechanism consists of two presser feet mounted in tandem and supported on an equalizer yoke. The pivots are so positioned as to give about twice the presure on the rear foot as on the front foot, with a given setting of the spring on the presser bar. The back of the front presser foot interlocks with the front of the rear foot, which is channeled so that it can straddle thick seams when sewing.

The action when sewing on work garments is for the front foot to hold the turned material, to confine the fold, and to strip the goods off the needles to form the needle loops. As the stitch is formed and set, the rear foot straddling the seam makes the feed pull the material through. Most of the feeding action takes place under the rear foot.

The makers advocate the machine particularly for matching the felled crotch seams of work garments. They announce that the new "tractor type" feed may be added to Style 35800 P and Style 35800 Q Union Special machines.

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1932 Edition of Davison's Textile Blue Book Ready.

Davison Publishing Company, 50 Union Square, New York City, announce the completion of Davison's Textile Blue Book for 1932. It is announced as the only annual register of the textile industry to be published in 1932.

All information has been brought up to date; the publishers state that corrections ordinarily average 20 per cent, but that this year they are up to 65 per cent.

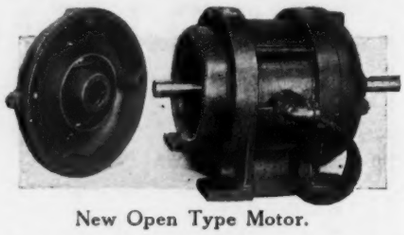
As is known, this standard directory incorporates Dockham's American Report and Directory. It includes full information giving: Directory of Cotton Mills; Woolen and Worsted Mills; Silk Mills; Knitting Mills; Jute, Linen and Flax Mills; Canadian Mills; Mexican Mills; Dyers and Finishers; Mills with Dye Houses, Commission Merchants; Converters; Yarn Dealers; Raw, Thrown and Rayon Silk Firms; Cotton Dealers; Cotton Warehouses; Wool Dealers; Linter Dealers; Waste Dealers and Manufacturers; Wholesale Rag and Remnant Dealers; Textile Supplies; New Textile Mills; Classified Directory of Mills.

Two editions are issued. The DeLuxe office size is printed on fine paper and contains all of the features enumerated in the Handy Edition, has all of this information except the Classified Directory of Mills, and the Textile Buyer's Guide.

The Salesmen's Directory, bound in flexible covers, is smaller, and carries full reports of all textile mills, dyers, finishers and bleachers arranged alphabetically—all mills under each town. The prices of the directory are Office edition, $7.50; handy edition, $5.00; and salesmen's directory, $4.00.

New Open Type Textile Motor.

A new Seal-Clad open type textile motor has been announced by Allis-Chalmers Mfg. Company, Milwaukee, Wisconsin. The manufacturers state that, "troublesome screens or similar devices for the prevention of lint entering the motor are eliminated. Improvements in design are incorporated to permit free travel of lint in the air



New Open Type Motor.

passages which eliminates frequent cleaning required by the standard type of motor."

The stator windings are covered at both ends, providing a smooth hard surface. The integrally cast rotor fans are so shaped as to eliminate pockets where fly could collect. Discharge openings for the cooling air are large and smooth. Motor housings have unrestricted inlet openings with smooth interior surfaces free from irregularities. In addition, the new design provides for cartridge type ball bearings, waste packed, or ring oiling types, long leads for flexible conduit, and straight or tapered shaft extension.

:: :: ::

New Book on Textile Analysis.

An important contribution to literature on the analysis of textile materials has been prepared by S. R. and E. R. Trotman, leading authorities on textile chemistry, the title of the book being "Textile Analysis."

A description of the contents of the book is best given by listing the 18 sub-divisions as follows: The Identification and Determination of Textile Fibres; Physical Tests for Textile Materials; Determination of Specific Gravity and Viscosity; Standard Volumetric Solutions; Analysis of Organic Compounds; Acids; Indicators and Their Hydrogen Ion Concentrations; Alkalis; Bleaching Agents; Water and Effluents; Analysis of Fibres; Oils; Organic Solvents; Formaldehyde; Tannins, "Blueing Agents," Glycerol; Starch, Dextrin, Glue, Gelatin, Casein, and Vegetable Gums; Metallic Salts; Nitro-compounds, Amines and Phenols; and The Detection and Analysis of Dyestuffs.

Experimentors, manufacturers and distributors of textile materials are familiar with previous works of these authors, who in this latest book have put the results of extensive research

"TELETYPEWRITERS HELP TO CUT OVERHEAD COSTS . . . SPEED SERVICE TO CUSTOMERS."

SHAWMUT WOOLEN MILLS, INC.

PRIVATE Line Teletypewriter Service—typing by wire—connecting offices of the Shawmut Woolen Mills, Inc., in two states, produces timely economies in billing, shipping, and accounting operations. Through the instantaneous exchange of accurate, typewritten messages afforded by this modern business aid, all billing is now centralized at headquarters, where formerly separate billing departments were maintained at each office. The resulting savings in clerical expense, duplications and verifications have been considerable.

This continuous two-way communication service is also used by other departments. Orders originating in the New York office are transmitted immediately and accurately by Teletypewriter Service to the Stoughton, Mass., plant. Credit information, order details, shipping instructions and notices, questions and answers are exchanged *in written form—in minutes.* Valuable time is saved in starting production, making deliveries.

Teletypewriter Service aids executives to direct and control wide-spread operations with paying results. Your local Bell Telephone Company will gladly give you detailed information about this modern communication medium that cuts costs and increases operating efficiency. Just call the Business Office.

BELL SYSTEM

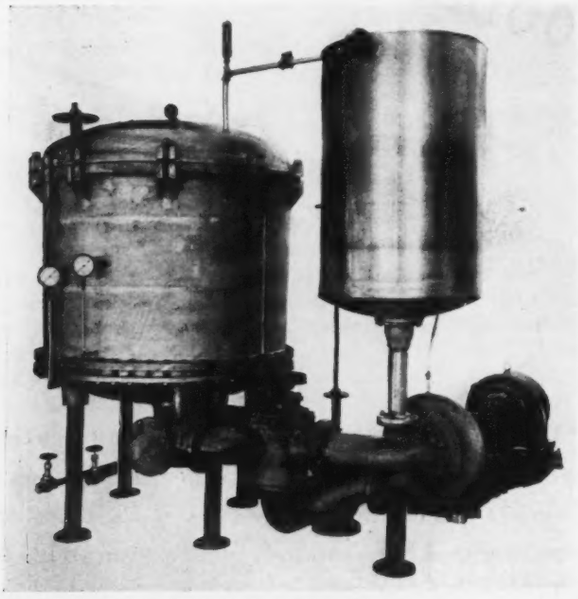
work, and have covered the various topics in a thorough, and up-to-date manner.

The book is published by J. B. Lippincott Company, Philadelphia, Pa., and the price is $6.50 a copy. It may be secured either direct from the publishers or through COTTON'S book department.

:: :: ::

Franklin Process Now Offers Rigid Tube Package Dyeing Machine.

Franklin Process Company, Providence, R. I., developers and manufacturers of the well known Franklin Process spring tube package yarn dyeing machines, have just announced the development and marketing of a machine of the rigid tube type as an addition to its regular line of Franklin package dyeing machines. The company explains that the reason for the development of this type of machine in their line is to meet the desires of yarn dyers who require a rigid tube method of dyeing; they explain that apparently the chief reason for this desire is in order to be able to buy yarn in the open market wound on perforated tubes (instead of on a spring tube) for dyeing. It is announced, however, that the Franklin Process spring tube dyeing machines are retained in the company's line as the main product.



The outward appearance of the Franklin rigid tube package machine is similar to that of the spring tube type . . . .

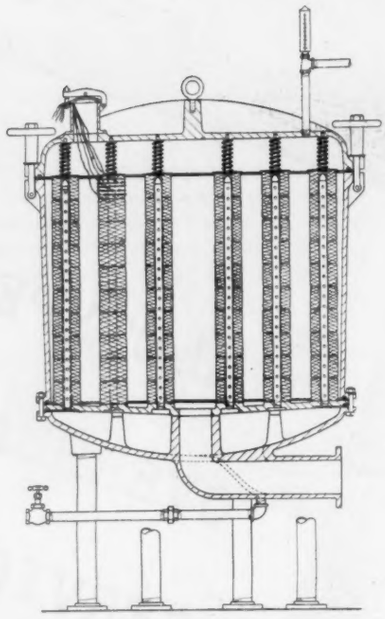
The company announces that in the development of their rigid tube machines, they have embodied many of the features of the Franklin Process spring tube type which, they explain, provides "minimum loading and unloading time, short dye bath, minimum floor space, low cost of upkeep and labor cost, and a one unit system."

The Franklin Process rigid tube dyeing machine does not use a removable drum carrier, with a separate spindle for each package, thus, it is pointed out, the time required for loading and unloading is reduced. The method of loading and unloading the new rigid tube dyeing machine is the same as with the older types of Franklin Process machines. That is, the holders or carriers of vertical spindles of special design permanently attach to the bottom of the machine. When loaded, four or five packages are dropped on each spindle; the packages are automatically held in place by means of a patented spring and plate device on the bottom of the cover, there being no caps or fasteners of any kind. The plates rest on the top package of each spindle column when the cover is lowered in the plates. After dyeing the packages are unloaded by hand with the aid of specially designed forceps.

The length of the dyebath in the new rigid tube machine is, it is pointed out, the same as in the Franklin Process spring tube machine—that is, eight pounds on one gallon of liquor to one pound of yarn; there being no drum carrier in the machine which also, it is pointed out, retains the feature of minimum floor space provided by the spring tube type machine.

As indicated, the spindles or yarn holders are not lifted out with the yarn, consisting merely of specially designed vertical rods permanently attached to the bottom of the machine, the tubes themselves forming a circulating pipe. It is pointed out that these rods are not exposed to rough treatment, reducing the risk of broken spindles.

The labor necessary for the Franklin rigid tube machine is, it is stated, the same as for the established type of Franklin Process machine. Furthermore, the manufacturers explain, the retention of the one-unit system provides the same features of increased production as were incorporated in the spring tube machine.



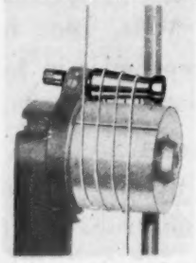
Showing the Franklin process principle of dyeing . . .

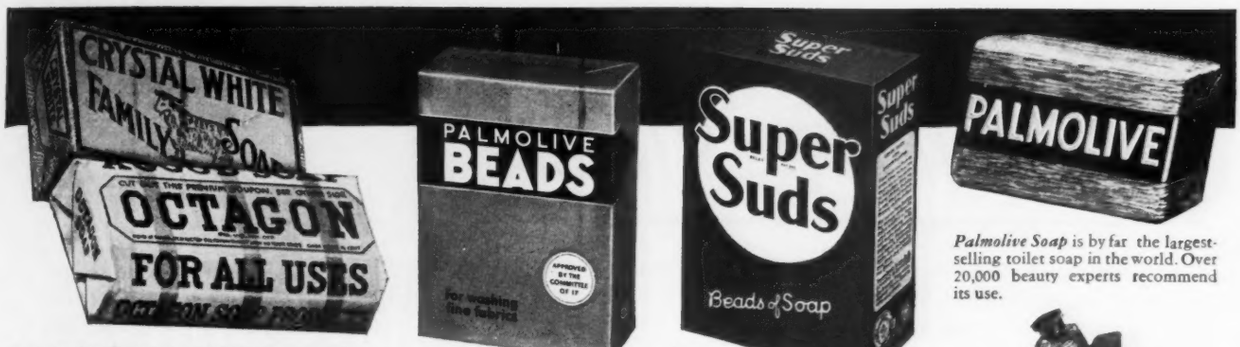
The new rigid tube machine uses a standard 5/8-inch diameter perforated paper tube, making it possible to purchase for this machine natural cotton yarns already wound for dyeing. The company states: "The disadvantages inherent in rigid tube dyeing cannot of course be eliminated in this new type of Franklin Process machine. These are softer packages that do not deliver so well as the spring tube package and the absence in the dyeing machine of any means of compensating for variation in the density of packages

:: :: ::

New Atwood Lap-Proof Separator Roll.

Atwood Machine Company, Stonington, Conn., recently introduced the New Atwood Lap-Proof Separator Roll, which, it is pointed out, helps to eliminate roller laps and consequent waste of silk and loss of production on 5B doubler-twisters; and also reduces split ends and singles. It is made of hardened and polished steel, and, it is pointed out, is readily installed on any 5B machine. The illustration shows the application of the separator to a single feed roll unit.





Crystal White Soap has earned a high reputation through years of use. It is the biggest selling laundry soap in the West and Northwest.

Octagon Laundry Soap is the largest selling laundry and household soap in the Southern States and one of the largest in the East.

Palmolive Beads is being used by millions for the safe washing of fine fabrics. Recommended by leading silk manufacturers.

More than one-third of American women now use Super Suds, new bead soap sensation for faster, easier dishwashing.

Palmolive Soap is by far the largest-selling toilet soap in the world. Over 20,000 beauty experts recommend its use.

1

2

3

OUTSTANDING QUALITY

has made these products famous

The same strict standards of quality govern the making of our famous textile soaps

THE maker of these world famous products offers you textile soaps that guarantee quality work at low cost. The same careful preparation, the identical strict standards of quality which are responsible for the recognized world leadership of Colgate-Palmolive-Peet products is maintained in every batch of soap we ship to your plant.

Our scientifically prepared olive oil soaps—for years favored by the textile industry—are the result of more than 125 years of soapmaking experience. Results in textile plants throughout the country have proved they do their work better and quicker . . . that they assure the quality of finished goods week in and week out.

Why not give these quality soaps an opportunity to prove their merit in your plant? Write today for prices and a trial run.

Texolive Kwiksolv
(*An Olive Oil Soap*)
Texolive Kwiksolv is an olive oil soap in spongy form. Its solubility and direct action will surprise you. (Contains 92% real soap.)

Arctic Olive Oil Soap
(*Bar, Bulk, Chip*)
This item is produced from 100% olive oil foots. Mild, neutral, rinses freely. Is especially valuable in processing silks, woolens, rayons and similar fabrics.

Texolive (*Bar, Bulk, Chip or Granules*)
Texolive is identical to Arctic Olive Oil Soap, except that it contains a small percentage of coconut oil to produce additional sudsing qualities.

Arctic Crystal Flakes
(*Or Granulated*)
Arctic Crystal Flakes is our finest high-grade, all-tallow soap, approximately 42° titre. 88% plus real soap content. It produces high tension, elastic suds.

1 *Colgate's Ribbon Dental Cream* is known and used everywhere. For 30 years it has been the world's largest selling toothpaste.

2 *Palmolive Shaving Cream* is the favorite of more men than any other kind, the largest selling shaving cream in the world.

3 *Colgate's Rapid Shave Cream* is second only to Palmolive Shaving Cream in sales and popularity the world over.

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Gentlemen: Without charge or obligation please send me the following:

- ☐ Industrial Soap Catalogue . . . *If It's Soap You Need—We Have It!*
- ☐ Degumming and Dyeing Bulletin
- ☐ Building Cleanliness Booklet
- ☐ Prices on items I am interested in (Please name products)
- ☐ Samples for Laboratory Examination (Please name products)

Name.....
(Please print name)

Company.....

Address.....

City..... *State*.....

NEWS ITEMS *with a Textile Slant*

Kindig Represents Royersford Foundry and Machine Company.

Royersford Foundry and Machine Co., Inc., Royersford, Pa., manufacturers of Sells roller bearings, pillow blocks, hangers and other transmission equipment, have appointed J. R. Kindig, Red Rock Building, Atlanta, Ga., as representative in the southern territory. Mr. Kindig will continue also to represent Dayton Rubber Mfg. Co., in the South.

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New "Highflex" Belt.

Another advance in the field of transmission belting has just been announced by The B. F. Goodrich Company, Akron, Ohio.

Progress in the rubber belting field, it is pointed out, has always been confronted with the stumbling block of those industries where it has been impossible heretofore to install factory made endless belts, or to use those laced with any of the conventional types of fasteners. These fields require belts to be made endless in their plants after being applied to the machine on which they are called upon to operate. After four years of laboratory and field experiments Goodrich announces a new belt and a simple outfit that enables plants heretofore unable to use rubber belting an opportunity to reduce transmission costs by use of this new product and method.

The new belt is named "Highflex Junior". It is built up of a greater number of plies of a specially woven fabric designed primarily to give the proper characteristics so necessary when transmission belting is to be spliced endless right on the machine. This new product is not to be confused with its parent "Highflex" announced several years ago. Highflex Junior is made only in widths 6 inches and under.

To develop this new belting program, Goodrich laboratories had to develop a special cement and tie gum for making the splice. When used with Highflex Junior, according to instructions, the manufacturers claim it will result in a long lived economical belt joint.

As a necessary adjunct of this program a line of electrically heated, automatically controlled portable electric vulcanizers was developed by the James C. Heintz Company of Cleveland. A light template for laying out and stepping down the ends of the belt so a perfect fit can be obtained, along with the necessary hand tools, complete the equipment.

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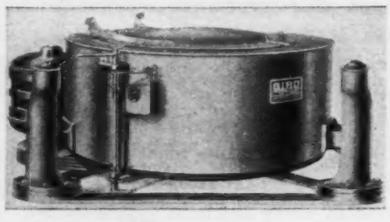
New Extractor.

A new laundry extractor, known as the Bird Gyro-Balanced Extractor, has been announced by Byrd Machine Company, South Walpole, Mass. It is the work of George Sherrerd, Otis Stone and John McKeon, well known centrifugal engineers now associated with the Byrd Company.

The manufacturers explain that the baskets of these machines are designed with extra depth and width of top ring, for greater capacity, and that the machine takes larger, heavier loads which are handled more rapidly. The extractor is a development of the familiar link suspension type. The entire assembly is suspended by ball-bearing mounted links from three heavy, steel pedestals, which are in turn rigidly mounted on a triangular steel bed plate. It is explained that the design of the links and link bearing is responsible for a part of the unusual stability of the machine. At top and bottom the links are carried in free-floating, non-friction ball bearings, eliminating binding and jerking. When the revolving basket tends to move slightly to compensate for an out-of-balance load, it is explained, the correcting movement takes place smoothly and instantaneously. The manufacturers point out that the ball bearing mounting permits the use of a strong, solid steel link.



New Extractor.

Each rotating part of the extractor is dynamically balanced before assembly, the entire assembly being dynamically balanced later.

Practically no cast iron is used in the construction, all stress-bearing members being of steel; joints are welded. The hoops which support the basket wall are set on edge and machined on the inside to the true diameter of the basket. The machine is fitted with a positive, interlocking safety latch, permitting the cover to be lifted with one hand when the machine is stopped, yet preventing any movement of the cover when the basket is in motion. It is equipped also with an extremely sturdy brake of large braking area. The baskets are supplied in a variety of resistant alloys and coverings. The extractors are being manufactured in 40, 48, 60, 72 and 96-inch sizes.

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Special Course in Textiles.

A special course in textiles is being offered in the evening session of the School of Household Science and Arts of Pratt Institute, Brooklyn, N. Y., which opened on September 26th. This course includes textile and fabric analysis, covering the relation of cloth to design in garment making, tests for quality and loading of fabrics, the manufacturing and buying of textiles, weaves and patterns, style and color analysis. It is also a part of the three-year evening course in clothing which trains students as finishers, drapers, assistants to designers, sample makers and costume sketchers. The study of textiles is also included in the two-year course in costume design offered in the day session. The subject includes the structure and manufacture of various textiles, microscopic study of textiles on the market, practical and artistic use of textiles.

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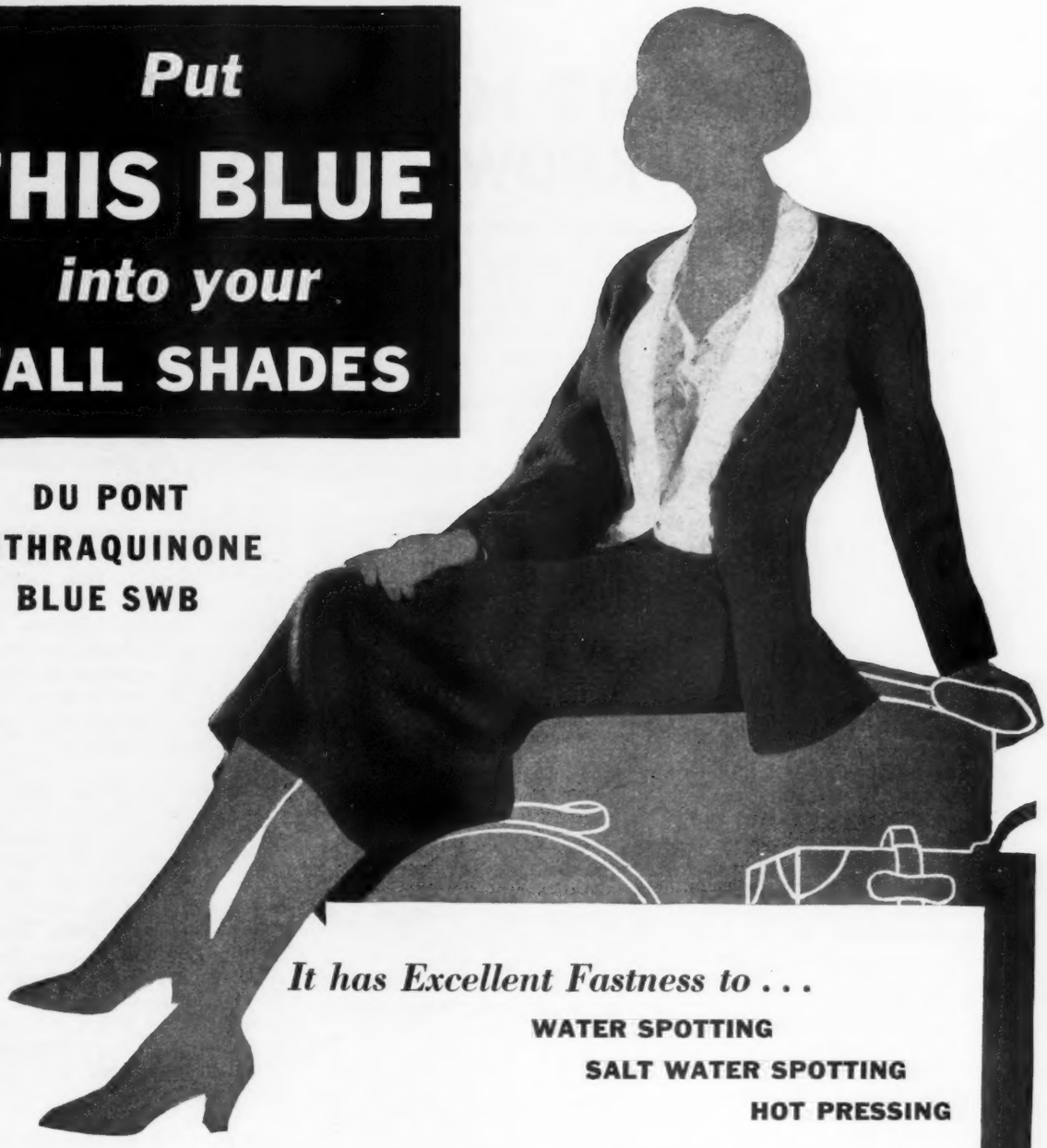
Gamon Meter Company to Work with Worthington.

An arrangement has been announced for the joint use of the manufacturing, engineering, sales and service facilities of the meter division of Worthington Pump and Machinery Corporation, Harrison, N. J., and those of the Gamon Meter Company, Newark, N. J. The sales staff of both organizations will report to and be directly responsible to George H. Gleeson, who will head up the meter sales activities of both companies.

The lines of the companies are supplemental, with the result that the products of both companies will continue to be produced as heretofore and together make a complete line of disc, current or turbine, compound and piston meters for measuring all liquids, such as hot and cold water, oil grease, gasoline and brine, it is announced.

Put THIS BLUE into your FALL SHADES

DU PONT ANTHRAQUINONE BLUE SWB



It has Excellent Fastness to . . .

WATER SPOTTING

SALT WATER SPOTTING

HOT PRESSING

IN ADDITION to its usefulness in self shades, Du Pont Anthraquinone Blue SWB is highly suitable as a component color in making certain browns now current for the Fall heavy-weight season.

You are no doubt meeting with the problem of water spotting and salt water spotting in making your shades. Du Pont Anthraquinone Blue SWB was produced to overcome these spotting tendencies. It does, for this color possesses excellent fastness to water spotting, salt water spotting and hot pressing.

Send for sample of this du Pont blue and play safe on your heavy-weight browns this season. And remember—our Technical Service Department is always ready to help solve your dyestuffs difficulties.

DU PONT DYESTUFFS
REG. U.S. PAT. OFF.

E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED

Dyestuffs Division, Wilmington, Delaware

SALES OFFICES: Boston, Mass., Charlotte, N. C., Chicago, Ill., New York, N. Y., Philadelphia, Pa., Providence, R. I., and San Francisco, Calif. Represented in Canada by Canadian Industries, Limited, Dyestuffs Division, Canada Cement Building, Montreal, Canada

NOTES ABOUT MEN YOU KNOW OR KNOW ABOUT

W. W. McLEOD, assistant general manager of the southern mills of The Kendall Company, with headquarters at Charlotte, N. C., has been transferred to the cotton mills of the Griswoldville Manufacturing Company, with headquarters in Turners Falls, Mass.

JAMES A. GREER has made a connection with the Pearl River Valley Lumber Company, Canton, Miss., handling the textile picker sticks and other hardwood textile specialties of the company's hickory products division.

HANS BARD has succeeded W. S. MORTON as superintendent of the Dallas Cotton Mills, Dallas, Texas.

A. D. ELLIOTT has been made superintendent of the cotton mill of The Trion Co., Trion, Ga. Mr. Elliott had been at Fayette, Ala., and previously was for a time superintendent of the Riverdale Mills, Enoree, S. C. N. BARNARD MURPHY is superintendent of The Trion Company properties, and W. E. WILLIAMS is assistant superintendent.

W. R. McELVEEN, formerly superintendent of The Southern Manufacturing Co., Athens, Ga., has become superintendent of the Adams-Swirles Duck Mills, Macon, Ga., which recently resumed operations under the management of W. B. SMITH, of Tennille, Ga.

M. F. MOSTELLER, former overseer of spinning at the Osceola Mills, Gastonia, N. C., is now overseer of spinning at the Union Mills Co., Monroe, N. C.

EDSON K. RICE has been made sales manager in the mid-western territory for the textile oils department of the National Oil Products Co., of Harrison, N. J. Mr. Rice, whose headquarters are in Chicago, has been previously affiliated with John Campbell & Co., and the Atlas Refining Co. KARL T. STEIK, head of the research department of the company, has announced that DR. JULIUS F. MULLER, PH.D., has been added to the laboratory staff as chemist and bacteriologist.

GASTON G. GAGE has been added to the teaching staff of the textile department at Clemson College as instructor in carding and spinning. He is a graduate of the department, and has been with the Aragon-Baldwin Cotton Mills, Chester, S. C., for about ten years.

JULIUS F. STONE, SR., prominent industrial and financial executive, has been made president of the Case Crane & Kilbourne Jacobs Co., Columbus, Ohio, manufacturers of the well-known "K & J" line of wheelbarrows, scrapers, warehouse trucks, etc.

GEORGE FISH has become connected with the mills of C. A. RUDISILL, Cherryville, N. C. He was formerly resident manager of the Elizabeth plant of Textiles, Inc., Charlotte, N. C.

J. H. FAGAN has become overseer of spinning at the Anchor Mills, Huntersville, N. C. He formerly held a similar position at the Union Mills Co., Monroe, N. C.

M. T. POOVEY has become assistant superintendent, Hannah Pickett Mill No. 2, Rockingham, N. C.

A. C. PENLAND has become overseer of spinning at the Park Yarn Mills, Kings Mountain, N. C., succeeding FRANK ROLLINS.

W. W. HARRIS has been made overseer of spinning at the Entwistle Mill No. 1, Rockingham, N. C. He was formerly at the F. W. Poe Mfg. Co., Greenville, S. C.

EUGENE MANNING is in charge of the textile chemistry and dyeing division of the textile department at Clemson College, S. C. Dr. Manning holds a S. B. degree in both civil engineering and chemical engineering from the University of Delaware, a S. B. degree in chemical engineering from Massachusetts Institute of Technology, and a Ph.D. in physical chemistry from the University of Pennsylvania. He came to Clemson from the research laboratory of the Ekland Leather Co.

Obituary.

LOUIS W. CLARK, vice-president of the Carolina Cotton and Woolen Mills Co., Spray, N. C., died suddenly of heart attack on Friday, August 19th. Mr. Clark was born in Boston, Mass., on November 6, 1870. He was graduated in textiles from the Massachusetts Institute of Technology, where he was for a short time an instructor; later removing South with the Cone interests in Greensboro, N. C. He went to Spray in 1900 as designer, and gradually was promoted through various positions to that of general manager of the eight plants of the company in Spray and Draper. He was vice-president of the Cotton Manufacturers Association of North Carolina.

A. ALEX SHUFORD, SR., textile executive of Hickory, N. C., died suddenly at Virginia Beach, Va., on September 3rd, while surf bathing. Mr. Shuford was president and treasurer of the Shuford Mills Co., the Granite Falls Mills Co., Granite Cordage Co., and the Hickory Spinning Co., and treasurer of the Highland Cordage Co. He is survived by Mrs. Shuford and three sons, A. ALEX SHUFORD, JR., WILLIAM SHUFORD and HARLEY SHUFORD.

C. H. COLE, manager of the Opp Cotton Mills and Micolas Cotton Mills, Opp, Ala., was shot to death on September 9th, by J. A. Childers, an automobile salesman. Mr. Cole, a native of North Carolina, was 59 years of age. He began his textile career as sweeper at the Great Falls Mfg. Co., Rockingham, N. C., working up through successive positions, and in 1905 became superintendent of the LaFayette Mills, LaFayette, Ga., later serving as superintendent at the Aragon Mills, Aragon, Ga., Lois Mills, Douglasville, Ga., Hannah Pickett Mills, Entwistle Mfg. Co., Buck Creek Cotton Mills, and the Alabama Prison Mills. In 1920 he joined a group of business men in Opp in organizing the Opp Cotton Mills, and later started the Micolas mill.

"EVERY KNOT A WEAVER'S KNOT"

▼

DEPRESSION
BRINGS OUT REAL VALUES

▼

Forehanded Mills Continue to Purchase Barber-Colman Spoolers and Warpers

▼

The absolute necessity of reducing costs has caused mill managers to scrutinize all purchases as never before.

FIFTY-TWO THOUSAND old style spooler spindles and corresponding warpers have been replaced by Barber-Colman spoolers and warpers during the last three years of depression. **Approximately one-half of this replacement has been made in the past twelve months.**

The real worth of Barber-Colman spoolers and warpers has again been demonstrated.

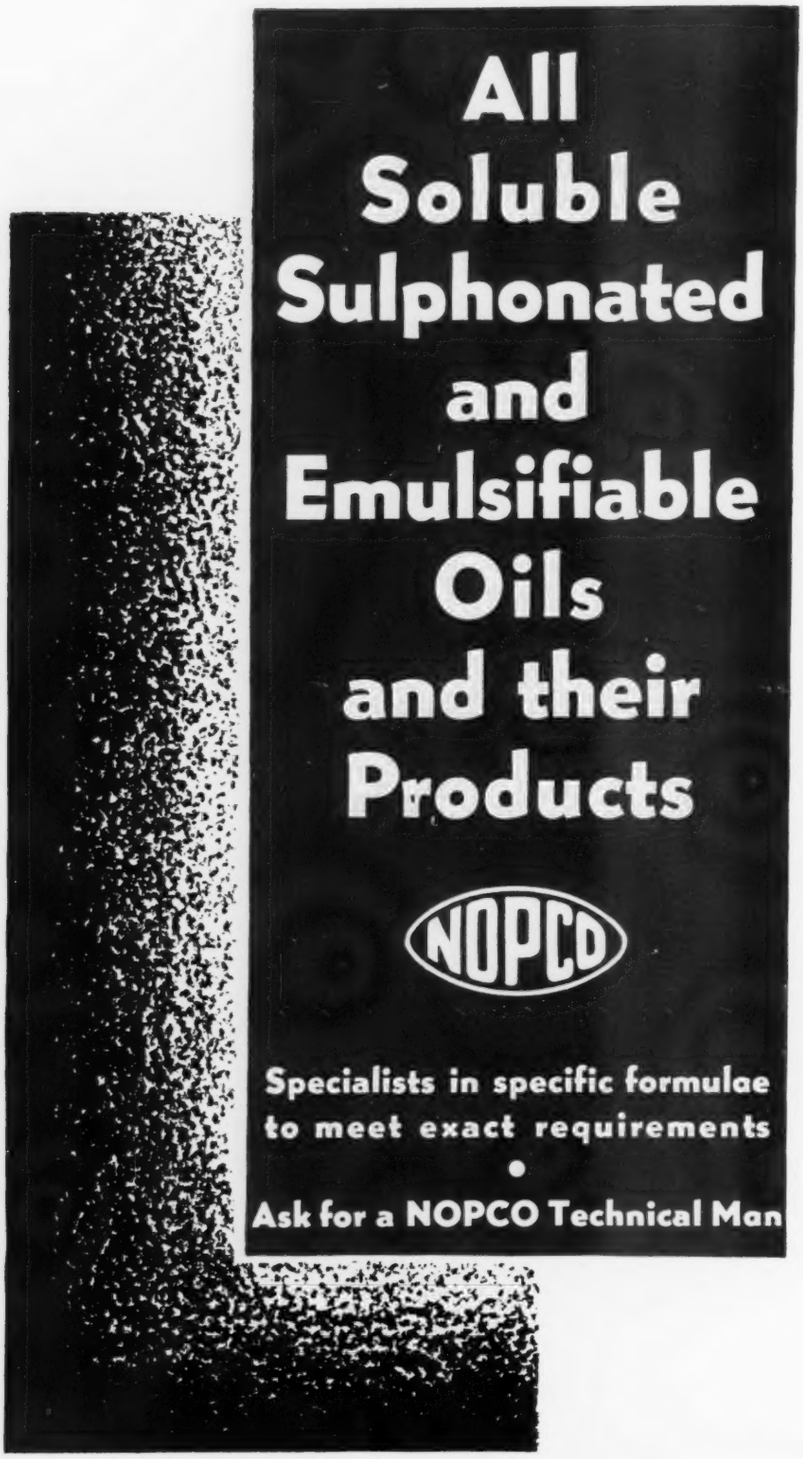
▼

See us at the Greenville Show

BARBER-COLMAN COMPANY

General Offices and Plant, ROCKFORD, ILL., U. S. A.

FRAMINGHAM, MASS. GREENVILLE, S. C.

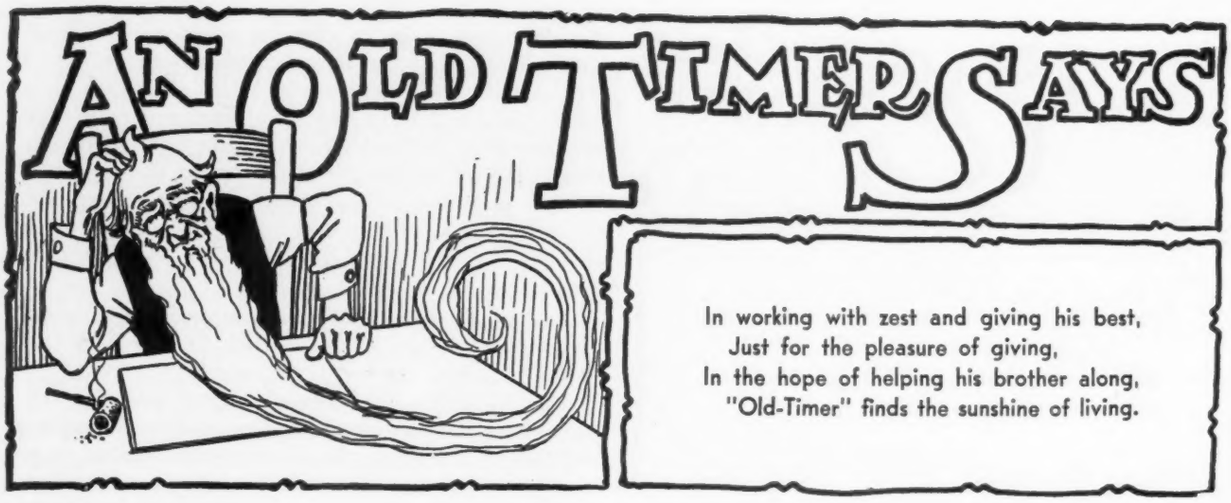


NATIONAL OIL PRODUCTS CO.

Boston
Chicago

HARRISON, N. J.

San Francisco
Hamburg, Germany


AN OLD TIMER SAYS
In working with zest and giving his best,
Just for the pleasure of giving,
In the hope of helping his brother along,
"Old-Timer" finds the sunshine of living.

The Story of Old Timer's Methods of Working and Management

Part Seven—Continued from September Issue

THIS, the seventh installment, continues the series in which Old-Timer and his friend Jim are discussing methods of working and management. In the sixth installment, in the September issue, they completed their discussion of the card room, and in the present installment, we find them talking about spinning room methods. Contrary to the usual custom, Jim does most of the talking this time in describing to Old-Timer some of his spinning room records.

Old-Timer and Jim will continue in the spinning room in the next installment and will subsequently continue through the remainder of the mill.

Readers are invited to request reprints of the six preceding installments of this series, in case they do not have them; thus securing the complete account as published up to the present.—The Editor.

(Note: Since this series is written in conversational style, it should be borne in mind that those paragraphs in regular type represent OLD-TIMER'S part of the conversation, and those in *italics* are JIM'S part.)

(Continued from September Issue.)

Okeh, JIM, and to get you wide awake, suppose you tell us how you are getting along with the spinning room record I started you on when you were overseer.

You know, OLD-TIMER, *I turned that record over to the overseer when I left the room. We have not kept our record on cards like you have explained in the card room. In fact, those card systems are somewhat new anyway, and we thought a book would do just as well. We have got the records all right. We can tell you just as much out of this old book here as you can with your cards.*

That's all right, JIM, shoot!

Ask me something then, so I can get a start.

No, instead of asking you questions, JIM, suppose you just run through the book and give us a general idea of what the records are, and we will get along faster that way.

All right, OLD-TIMER, *the first item I find is Roller Cleaning. My book shows that the overseer inspected rolls for cleaning 1/7/24, and again 2/18/24 and again 3/18/24, and so on.*

You understand, OLD-TIMER, *that this is simply a plain blank book, commonly known as a single entry ledger.*

We put the item Roller Cleaning at the top of the page, then simply enter the date and any other information that we care to have, under the heading.

For example: Our frames are all numbered, and it would take too long for the overseer to go over all the frames at one time, therefore, he enters the number of frame where he starts and stops so that next time he knows where to take up the inspection. Then too, we usually enter some remarks as to most anything which dirty rolls or clean rolls might have a bearing on; I mean anything which would be affected by clean or dirty rolls.

To illustrate, here is an entry.

6/19/24—Most of rolls carelessly picked—work not running well—Dry and windy—Have instructed all section men to have rolls picked well and clean rails and backs well, and I will be back over them tomorrow. Have closed up part of windows and raised pressure on humidifier pumps 10 pounds.

You see, the overseer ran into a bad day during this inspection and did several things in an effort to help the running of the work.

Let it also be understood that, as previously explained, we have this item of Roller Cleaning to be sure that the overseer makes a specialty of that one thing at certain times. It is recorded in this book so that overseer and superintendent can sit down at times and look through the book together and know beyond

any doubt that this item has had attention—special attention—on the dates entered.

This, I find, oftentimes gives us food for thought, so to speak. That is, we will sit down to look over the book, and in discussing the inspections we often get new ideas.

Just another entry and we will pass on:

10/2/24—Looked over all warp—Rollers were in good shape—Mary ——— on No. 4 section had not picked slats (top clearers). Beulah ——— on Sec. No. 8 skipping slats and not doing good, neat job on picking the rollers at the stands.

The next item is Roller Oiling, and the first entry is 1/7/24—Looked over every other alley on both warp and filling. Rolls well oiled—little too much oil on stands—spoke to oiler about—took oil cup and oiled 4 frames for him. He was trying to go too fast and had an oil step with too large a hole.

1/28/24—Took second-hand with me to look over roller oiling—found all rolls well oiled—told oiler so.

Say, did you notice that "told oiler so?" We tell a man when he does good work. In fact, we show him we are proud of him when he does good work. Of course there is no need to explain about what we do when he does bad work. Everybody already knows what most overseers and superintendents do—raise the dickens. But, to tell the truth, we do not always do that. We first talk to the operative about it. We try to determine just why he is doing bad work, that is, from ignorance, a lack of real understanding of what it means to the machinery if it is not oiled properly—that if you miss oiling a bearing just one time and let it wear, then you can pour a barrel of oil on it, but you can't get the wear back—or whether he is just naturally one of those careless fellows or whether or not he is the type that is deliberately trying to get by with any kind of work and looking for nothing but stopping time and pay day.

After we determine his class, so to speak, then we take the necessary steps to get good work.

5/23/24 rolls dry on Sec. No. 1 and No. 4. Hilliard ——— is oiler. He was skipping frames. Put him back on doffing.

You see, OLD-TIMER, *when we build up a record of several years of this kind of inspections you can begin to realize its value. You can look over such a simple record as this and see where we have changed our methods—where we have used different kinds of oil—where we have tried different lengths of time to oil the different parts.*

Goodness, man, you have no idea what a satisfaction it is to know that there is not something running down because you have forgotten it in your regular routine.

(Editor's Note:—The reader will realize there are many items OLD-TIMER and JIM cannot publish because they are so closely connected with their particular methods and the firms they work for, that many of our readers would recognize them.)

"Inspection of Bad Rollers".

This entry, OLD-TIMER, *means that the overseer has taken a certain amount of time, say 30 minutes, and devoted that time especially to inspecting the rollers which have been taken out. At this time he usually lets the section men know what he is doing by having something to say to each one about rollers—probably ask No. 1 why he took out this roller—ask No. 2 if his rollers are covered any better than they have been—ask No. 3 if he has more front rollers to take out than he needs for back rollers. Probably next time he will call all the section men together and ask them all the questions he can think of about rollers, etc. Oftentimes some section man will bring out something that is a new idea, and new ideas are the things we are after.*

Just to illustrate how it pays to have these special inspections where you do nothing else for a certain length of time:

The other day the superintendent and overseer made the roller inspection together, and as they talked and looked at rollers the superintendent asked what one cause sent most rollers to the shop. Some said one thing and some said another. "All right," said he, "I am going to find out," and he made out a report sheet, to be filled in at the roller shop, showing what was the cause of each roller coming back, so far as we could tell. He also found out that we had different names for the same thing; that is, a section man would state the cause of a roller being taken out and the roller shop man would describe it by another name, but they both meant the same thing. Therefore, he got all section men, second-hands, overseers and roller shop men together and made out the report blank by the designations agreed upon to describe the different causes for rollers being taken out.

Now here comes the explanation, or illustration, showing how and why the system of inspection being described is so valuable. When that report was kept a reasonable length of time we all got together again to look it over, and the most outstanding part the report revealed was that the majority of the rollers were not being taken out because they were worn out; that is, the total of rollers taken out for all other causes was greater than the total of rollers taken out for being "worn out".

Then the superintendent asked the question: "Why should I buy such high priced skins if the majority of the rollers do not stay in the frame until they are worn out? Why not buy a cheaper skin, providing that skin has the same spinning qualities. In other words, if a roller covered with a cheaper skin would spin just as well, then why not purchase the cheaper skin?"

He sent for the salesman and questioned him about the quality of the leather in the cheap skins in comparison with the quality of the leather in the high priced skin.

The salesman explained that the skins were grades firsts and seconds on account of small defects in the skins. For example, a small hole in a skin would throw it in the seconds, but the quality of the leather, with the exception of the small place where the hole was, was the same.

The superintendent bought some of the skins, had the rolls covered for one spinning room with them, and after comparing the records of that room for six months found there were no more rollers being taken out than before. The cheaper skins had more waste leather; they would not cut as many cots to the dozen, but the price was so much less, that the final results

showed $4.90 per dozen saving, and he then put the whole mill on the cheaper skins, with a resultant saving of almost $2000.00 per year—(two mills totaling about 170,000 spindles.)

The salesman explained that competition was so keen with the trade that the least blemish on a skin caused them to throw it out to be sold to the shoe trade and for other purposes, and that was what made the price so high. Mills were inspecting the skins so closely and demanding such perfect skins that the leather manufacturers were overstocked with slightly defective skins and could afford to make a substantial reduction in price.

It pays to know what you are doing, and the best way to find out is to keep unbiased, accurate records.

We do not take the judgment or statement of any salesman or overseer or of anyone else for a fact. We keep records which prove what is best, what lasts longest, what is cheapest. This does not always mean the supply that costs the least in dollars. In fact, the reader will see thoroughly demonstrated, as this system is further explained, that oftentimes it pays more to pay more money for the very thing that the average agent or treasurer would argue to the last minute would be a waste of money.

(In the next installment of this series, Old-Timer and Jim will continue their discussion of spinning room supplies, records, etc. If you wish clippings of previous installments, let us know.—The Editor.)

Old-Timer Short Shots.

Don't envy successful men. *Be One.*

There never was an age in the history of the world when it was so true that *Knowledge is Power.* The age when experience alone brings promotion is past, for no one mans' experience, by itself, can keep pace with the experience of all the overseers and superintendents in the business. Men must take advantage of what others have learned and are broadcasting free of charge through COTTON.

The college man must get practical experience after leaving college and the practical man can get technical training during his spare time. But if we "OLD TIMERS" don't wake up, that college man will get his practical training faster than we get our technical training.

The time to rest is not during work hours; that is, if you ever expect to get that bigger job.

If you are satisfied with just a common job like the majority have, then just drift along with the crowd. But if you have got the *will power* to pull away from the crowd, to study hard, to work hard, to be loyal, to be a gentleman, you will soon be able to look back at the crowd and say "such fools!"

This electric light I am working under sure does give a good light, but it has to have "something behind it," so to speak—otherwise it is just a piece of glass and wire. Do you put something behind your work?

An overseer or a superintendent will remain "little," just as long as he has only a "little" vision.

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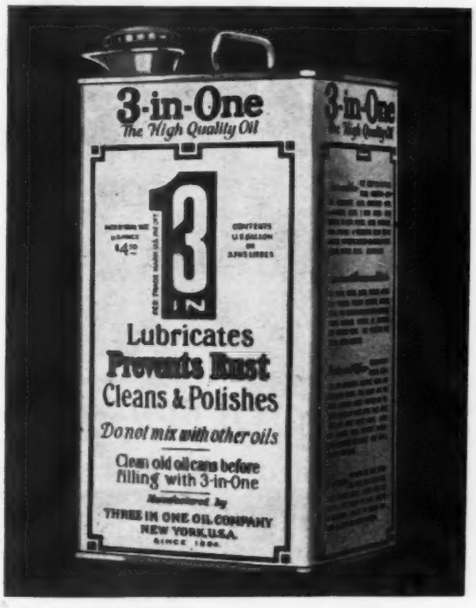

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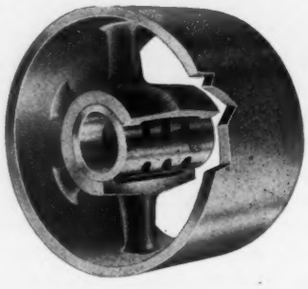

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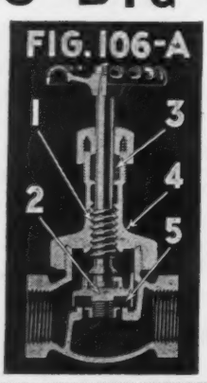

Fig. 106-A Jenkins Standard Bronze Globe Valve has:—

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HOW OTHER MEN MANAGE

Practical Discussions by Cotton's Readers On all Varieties of Mill Subjects

Points on Weaving Sateens.

Some practical ideas on weaving sateens 4/1 or 1/4.

EDITOR COTTON:

I have just been asked which is the best way, or rather the right way, to weave sateens—4 up and 1 down, or 1 up and 4 down; and I am writing this to give the results of years of sateen weaving. But, as Will Rogers says, this is only one man's opinion, and others may get just as good results from different methods. With them I do not wish to argue for argument's sake, but, after they have read my ideas, I would be glad to read theirs in "HOW OTHER MEN MANAGE".

Of course, every weaver knows that the harness on sateens are lifted 1 — 3 — 5 — 2 — 4, and 5 — 3 — 1 — 4 — 2, but perhaps all do not know why or how to arrive at the lift. A sateen is a weave in which the threads are mixed or lifts broken without getting one float in filling thread any longer than another. For instance, a sateen cannot be woven on a four or six harness—that is, a true sateen—but they do make what is termed a six, but it is nothing more or less than a broken twill.

In getting the break of harness on any number of harness, the number of harness must be divided into two numbers where one is not divisible with or by the other. We will take the 5-harness, dividing 5 into 2 and 3 and using 2 for the counter, we get this result: put down number 1 for first harness; add 2 equals 3 harness; add 2 equals 5 harness; add 2 equals 7; subtract the number of harness, 5, equals 2 harness; add 2 equals 4 harness—and we have the harness lifting 1 — 3 — 5 — 2 — 4.

By using 3 for a counter we would get the other lift of 5 — 3 — 1 — 4 — 2.

Now you can see why 6 harness is not a true sateen, as you can only divide it 2 — 4 or 3 — 3; and if you will count with either two or three, you will see that it cannot be carried through to six harness, so we would do the best we could and lift 1 — 3 — 5 — 2 — 4 — 6, showing that 1 and 6 would come together.

We have two sateens—a warp and a filling sateen. In the warp sateen the warp predominates in the count, and in the filling sateen the filling predominates, and I find that the lifting of the harness is a great many times fixed by the customer or sample of cloth one is to reproduce. Warp sateens run 88x60, 94x64, 104x64 and 112x64, and any other counts so long as the warp predominates, but these are some of the standard goods, and are made in considerable quantities in the South; although the 112x64 is usually made with 28s warp, the others with 14s and 17s warp—and I have made the 112 with 20s warp.

I have for a good many years always woven the warp sateens face up, or 4 up and 1 down, because except on some intricate (dobby) or very heavy lifts, I think cloth should be woven face up, as one can get a better cover, and can see that he gets it; and although the mispicks do not show up so plainly, all other defects are before the weaver and fixer. It also lessens the danger of wrong draws which weavers are prone to make, especially if the warp is reeded 3 or 4 in a dent. Also, that bugbear—loops in warp threads—may be seen quickly, and loops are not so apt to occur.

Harness should be set about 2 inches from the fell of cloth to reed, when the passing harness are even; two inches may not be the best always, but by moving a little either way, the fixer will soon arrive at the point that will give him the best results.

Loops are caused by bad setting, slack warp, slack threads from poor slashing, and a slow lazy motion in the harness when crossing each other. As there are generally a large number of threads to the inch, and the same in the reed, the threads must pass each other with a snappy motion. In this connection I would say that the automatic loom builders a few years ago brought out some cams that had a degree of swiftness in the change that almost wiped out all troubles with loops, and anyone who is bothered with loops, and is using old cams, should get a set of the later ones; he will get the surprise of his young life.

If there are any still using the old roller type looms, they may not agree with me, and may be running warp sateens upside down. But as I have done both, I know that though it may be a little easier to set the old roller loom, it was almost impossible to get as good a cover.

A filling sateen is a very easy weave unless it goes to extremely high picks, and even then it is not as hard as a warp sateen. In these days when weavers are running 50 and 60 looms on sateens, you will always find the goods to be a low count filling sateen; the warp sateens having so many more ends to the warp makes a great difference to the weaver.

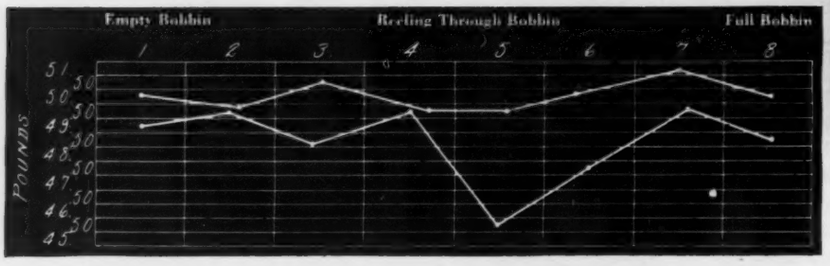
◆ ◆

WE invite our readers to make use of this department for the discussion of any and all problems arising in the mill or finishing plant. Questions, answers or letters need not conform to any particular style and will be properly edited before publishing. The editors do not hold themselves responsible for any statement of opinion or fact which may appear in this department unless so endorsed. This department is open to all.

◆ ◆

UNIFORM TENSION AND TWIST ON YARN— from empty to full bobbin

• New REEVES* Spinning and Twister Frame Drive *AUTOMATICALLY* Increases Spindle and Front Roll Speeds as Bobbin Fills, Giving More Uniform Yarn and Faster Production . . .



BREAKING STRENGTH CHART—34's YARN

This test-chart graphically demonstrates the greater uniformity of yarn from a REEVES-driven Frame (upper line). More uniform yarn always has greater breaking strength. Lower line of chart shows inferior breaking strength—resulting from lack of uniformity—of same size yarn from same Frame driven at constant speed.

Front view of REEVES Drive, showing motor on vertical sliding base, adjusted for starting by convenient handwheel control at top. As motor moves down on sliding base, V-disc pulley on cylinder shaft expands giving a faster driving speed. . . . Note extreme compactness of installation. Complete drive requires no more space than ordinary constant-speed individual motor drive.

• Ring spinning is at last freed from the costly restrictions imposed on quality and production by constant speed. The new REEVES Spinning and Twister Frame Drive provides VARIABLE speed, which controls spindle and front roll speeds automatically. Speeds are increased in exactly the proper ratio, as bobbin fills, to insure uniform tension and twist on yarn at all times.

Proper starting speed of cylinder for empty bobbins and maximum speed for full bobbins are established on convenient speed indicator. Then, as bobbins gradually fill the speed automatically increases up to maximum limit—from empty bobbin to full bobbin. This automatic speed variation, under positive control, insures yarn of better quality, of more uniform size, twist and strength, as well as faster production. The increased production alone pays for Drive in short time.

Observe the two tables shown here.

OPERATING AT CONSTANT SPEED

Diam of Bobbin Inches	R. P. M. Front Roll	R P. M Spindle	R. P. M. Traveller	Prod Inches Per Minute
1	116	10200	10085	364
1⅛	116	10200	10097	364
1¼	116	10200	10107	364
1⅜	116	10200	10116	364
1½	116	10200	10123	364
1⅝	116	10200	10129	364
1¾	116	10200	10134	364

Production per spindle per week of 60 hours, 43.33 hanks or 1.25 pounds

—AT REEVES VARIABLE SPEED

Diam of Bobbin Inches	R. P. M. Front Roll	R P. M. Spindle	R. P. M. Traveller	Prod Inches Per Minute
1	116	10200	10085	364
1⅛	122	10710	10602	383
1¼	128	11220	11118	402
1⅜	134	11730	11631	421
1½	140	12240	12147	440
1⅝	146	12750	12660	459
1¾	146	12750	12660	459

Production per spindle per week of 60 hours, 49.76 hanks or 1.46 pounds Increase of 16.8 per cent

Through REEVES regulation, advantage is taken of the decreasing tension by increasing speed, thus increasing production 16.8 per cent in this test and producing much better quality of yarn. Note that REEVES Drive maintains same ratio between R. P. M. of spindle and R. P. M. of traveler throughout the doff.

Understand that this complete REEVES Drive, with its automatic variable speed facilities, requires no more space than the ordinary constant-speed individual motor drive. Readily installed on frames now in service, for either warp wind or filling wind. Entire mechanism of Drive and automatic control quickly understood by any operator. Speed settings for various yarn sizes quickly established by turning handwheel.

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Low filling sateen counts are 64x72, 64x88, 64x112; these are a cinch for the weaver, but 84x124, 96x160 and 100x180 are some harder.

I have not made many of these for a good many years, but would run them 1 up and 4 down, as it is easier, if high picks, to get the picks in, and being right side up, all defects show up, and a good cover is more easily secured. I believe that most weavers run these goods 1 up and 4 down and I cannot see why it should be otherwise.

Both sateens should have a tape selvage, and on any heavy pick goods it is wise to have a few outside threads of ply yarn.

These are my ideas and my experience. As stated, I think it would be helpful to everyone if readers who disagree would outline their ideas in the discussion department. I for one would be glad to hear from them.

CONTRIBUTOR No. 6145.

Points on Operating a Spinning Room.

PART THREE—"Learning the Mill Game."

Experiences in getting right wind for new Barber-Colman spooler; saving on travelers, light bill, etc.

EDITOR COTTON:

What do you think? I have been made overseer of spinning in a room of 64,000 spindles, and am I proud! Now, as a matter of fact, I was somewhat nervous, this being the first real responsibility for me to experience, but I decided that here was my opportunity, and that I was going to take advantage of it.

It took me quite a while to get my bearings, but I finally became accustomed to everything and began to settle down to some real work. I started looking for ways to increase production, cut down the cost, improve the quality and running condition of the yarn, and to get the good will and respect of the employees.

One of the first things I did was to have a good heart-to-heart talk with the section men. I have five section men, and I told them that I wanted each man to run his job as though it belonged to him, and that each was responsible for anything pertaining to his particular section; also, that I would back them up at all times so long as they were in the right. You know, I don't think a section man can run his job very well if he tells his operatives to do a thing a certain way and then the overseer comes along and tells that operative that it will be all right if he or she doesn't do what the section man told him to do. In other words, if the overseer will discuss all such matters with his section men so that they will know what his ideas are in a general way, then there is not so much likelihood of conflicting orders.

I really believe this helped my job, because each section man went about his work with more vim and the room began to look cleaner and all the other help went about their jobs as though they were interested in them. I practice the rule of trying to treat everyone alike.

Then, just about the time I thought everything was running along pretty well, I learned that the management had bought Barber-Colman high speed spooling and super-speed warping. Well, I thought we were in

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for it, because I had always heard that this equipment "kicked the spinner right in the pants". In other words, that it really made him make the yarn as it should be made.

The only thing for me to do then was to start and learn all I could. I found we were going to have to make the combination wind, as the superintendent said he thought we could get the most yarn on our bobbins by this wind, and more front roll speed. We only had a few frames on the combination wind, but we were getting along fine with it, therefore, I didn't think we would have much trouble as far as the wind was concerned.

Then one day about a month before we were to receive our first units of the equipment, one of the Barber-Colman men arrived to help us get our frames set up for the spooling. The superintendent sent him up to the spinning room and told us that this man would stay with us until he thought we understood what it would take to make a good bobbin of yarn on the combination wind and one that would spool off well on the new spoolers.

I told him I did not think he would have to stay with us very long, because we were already making what we thought was a good bobbin on combination wind. It did not take him long to show me that I was "all wet". He said a bobbin that would spool off well on the old-fashioned spooler would not always spool off on the Barber-Colman spooler because the latter spooler ran at so much higher speed than the old type spooler.

He said we would have to have a good firm bobbin with a nice long taper at the top so the yarn would spool off without sloughing. The only thing to do then was to let him show us just what type build we would need and just how to set the frame up to get the build that he recommended.

The following is our set-up on a Fales and Jenks frame with a warp cam and a filling builder. For combination wind we use a 4½-inch stroke for five picks. This gives us a good taper at the top of the bobbin and it spools off with as few sloughs as any setting we have found so far.

This did not give us as much yarn on our bobbin as we wanted, so we decided to put on what we called a production pulley so that we could get more yarn on the bottom of our bobbins; we did not need any taper on the bottom. After putting this pulley on, we got approximately a half hour more yarn on the bobbin. Some people call this pulley a bobbin former, nevertheless, it works between the short and long traverse chain in the place of the single chain pulley.

After we put this production or bobbin former pulley on, we found that on some of our frames we would get too much yarn at the bottom, and this would cause the yarn to pile over and tangle, thus it would not spool off. Then, on some of the other frames, we would not get quite enough yarn at the bottom of the bobbin. In order to keep from putting too much bunch on the bottom of the bobbin, if we would take out one link of the chain it would take off too much bunch, and, vice versa, if we were not getting enough bunch and would put one more link in the chain it would give us too much bunch. So we were surely up against it.

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1 To see the unusual economy possibilities of Utsman Bobbin Stripper, Type K Bobbin Stripper, Termaco Roving Bobbin Cleaner—as demonstrated in actual operation.

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3 To talk with the special representative of the Economy Baler Company, who will gladly discuss your baling problems with you.

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One day while talking this over trying to find some way to get the same bunch on every frame, we decided that if we could arrange some way to let-off or take-up on the chain just a fraction of an inch either way we would get the same bunch on every frame. We began to look for some way to do this.

After a lot of hard work and thinking, we decided we would try a small turnbuckle between the chain that wraps around the ratchet pulley and the short chain that goes over the production pulley. On trying this, we found that we could adjust the bunch just like it should be. We had our machine shop make enough turnbuckles to go on all our frames, and we soon had them all making the same type of bobbin.

Of course, the type and make of the frame in use has a lot to do with the way in which it would have to be set up in order to get a good firm bobbin of yarn that will spool off.

The size of the bobbin should also be considered; in referring to size I mean diameter. I would suggest a bobbin not less than 7/8-inch in diameter. My reason for saying this is because if the bobbin is much smaller and a 1¾-inch ring is being used, there will be more ends down during the first half an hour after doffing than for the rest of the doff, and the yarn will not spool as well as it does off of a 7/8-inch or larger bobbin.

Another requisite is to be sure to have the doffers hold the traverse almost at the bottom of the bobbin until the bobbin has made quite a few revolutions so as to tie the loose end down. Unless this is done it will be found that the loose end will fly up and break the end down when it begins to spool off.

We always run as heavy a traveler as we can and still have good running work, because, as you know, this will make a good firm bobbin of yarn which will spool off well. Running the heavy traveler will also help to get more yarn on the bobbin.

From time to time, on my trips over the room, I noticed that all of the spinners carried travelers in their pockets and I also noticed that there were always travelers in the waste and on the floor; in fact, everywhere I looked except in the traveler cups on the frames. One day I had all the section men in the office and asked them why they did not keep their travelers in the cups. They said they had tried to get the spinners to use the travelers out of the cups instead of carrying them in their pockets but had failed to make a go of it.

"Well," I said, "You fellows are going to keep travelers in the cups from now on, and you are to inform all the spinners that anyone found using travelers out of his or her pocket will lose his or her job." Our traveler cost decreased more than 50 per cent and we only had to relieve one spinner of her job, and we soon let her go back to work.

By the way, do you know how much it costs to burn the lights in a room for one hour or one day? One day about ten o'clock in the morning I was working pretty hard, as usual, when the manager walked up to me. He asked me why I had my lights burning and I could not tell him why except that they had not been cut off since changing time. I was all set for a god cussing out, but as usual, he did the unexpected and merely asked me if I knew how much it cost the

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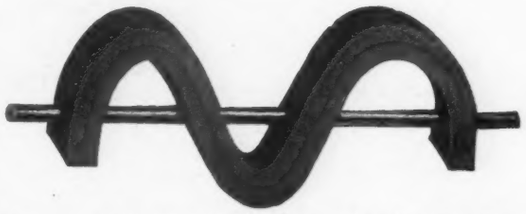
Textile Leathers



As you look for the mark "Sterling" when you buy silver, look for the name Bondaron when you buy Textile Leathers. It is your guarantee of quality.

Made from the world's finest hides, specially tanned, and with the hair retained, Bondaron Leathers have been developed until they have no equals in the leather field.

It has been proved in many mills that Bondaron is the longest lasting, most efficient and economical Textile Leather obtainable If you want to be sure you're getting the most for your textile leather dollars, we suggest that you equip your looms with *genuine* Bondaron. A trial will convince you.

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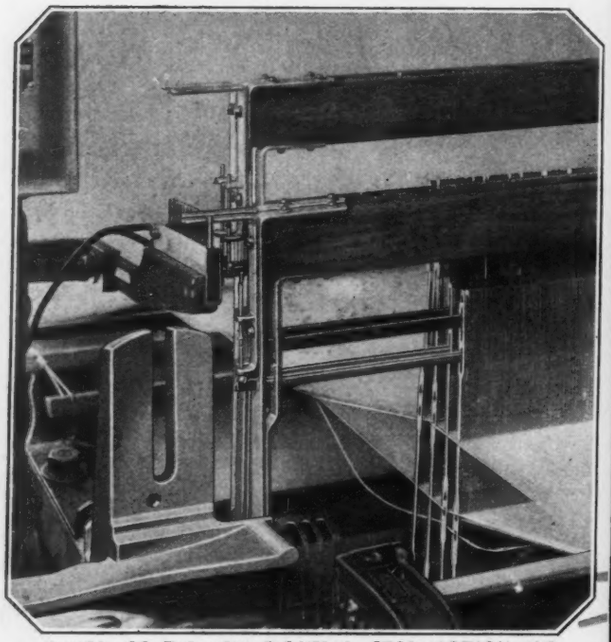

PHOTO OF THE NEW ELECTRIC STOP MOTION AND AUTOMATIC SAFETY HARNESS CONTROL

PATENTS APPLIED FOR

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for there you will find many items of interest—the latest in harness equipment—money and labor savers—items designed to meet present-day conditions, economies and competition.

There will be shown:

- a Simple Electric Stop Motion;
- an Automatic Safety Harness Control;
- a Self-Adjusting Warp Tension Device;
- the latest in Jacquered Doup or Leno Heddles;
- a Hook Reed for leasing warps running through present slashers in cotton mill, permitting the use of warp twisting in machines with artificial silk.

They are the results of years of intensive experimentation and testing.

In their now perfected stage we offer them to the mill man who is seeking the most modern and economical methods.

So don't fail to drop in and have the respective items explained to you.

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Foreign Offices
Huddersfield, Eng.
Shanghai, China

Steel Heddle Mfg. Co.

company for me to leave the lights burning when they were not needed. I told him that I did not know.

Here's the way he explained it to me: In my room there are approximately 150 lights. We use 200 watt lamps. Our rate per kilowatt is one and one-half cents. I had left the lights burning four hours for no reason at all. There are 1,000 watts in one kilowatt.

Therefore,

$$\frac{200 \times 150 \times 4}{1000} = 120 \text{ kilowatts to run lights 4 hours}$$

$120 \times 1.5 = \$1.80$, the cost to run the lights 4 hours.

From that time on I have always tried to keep the lights out as much as possible.

Another improvement I think we have made in our room is in the method we have of laying roving on the frames. Formerly we put our roving two layers high on the frames, but after very careful observation and inspection we found that there was always some roving of the bottom layer that remained on the frame for weeks before the spinner finally put it in the creel, and only then because the roving had been allowed to run low on the frame. We believe that roving which has lain on the frame for two weeks or more has dried out and will not run as well as fresh roving.

At present we place only one layer of roving on top of the frame and even with only one layer we find that it is not creeled as often as it should be, so at least once every week we run all the roving off of every frame. We let the day shift run off one half and the night shift the other half. In this way we know that we always have fresh roving on the frames.

In my next discussion I will give a complete layout of my job, number of frames, yarn numbers, front roll speeds, twist, drafts, hank roving and other facts.

(To be continued)

YOUNG TIMER.

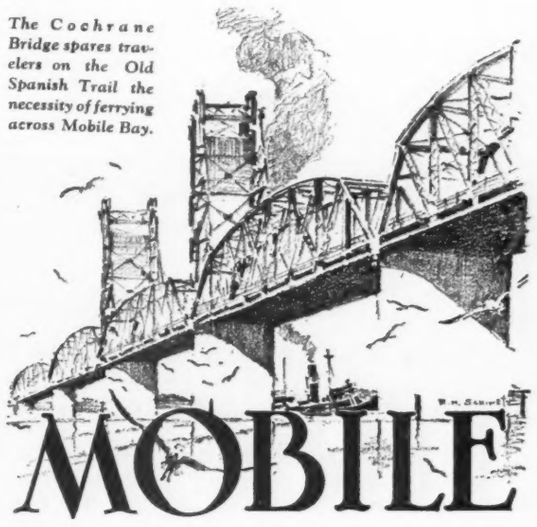
Card Settings for Coarse Yarn

EDITOR COTTON:

Sometime ago one of your contributors listed several of his card settings, and stated that he would like to have recommendations as to changes, with reasons. For convenience, I am listing his settings as given in the April, 1931, issue.

Feed plate to licker-in	12
Mote knives, top	10
Mote knives, bottom	7
Licker-in to cylinder	10
Back plate to cylinder, top	17
Back plate to cylinder, bottom	34
Flats to cylinder, back	12
Flats to cylinder, center	10
Flats to cylinder, front	10
Front plate to cylinder, top	34
Front plate to cylinder, bottom	27
Doffer to cylinder	10
Doffer comb to doffer	34
Licker-in screen	17
Cylinder screen, front	$\frac{3}{16}$ inch
Cylinder screen back	34
Cylinder screen, center	34

I think "CONTRIBUTOR No. 4967" has some fairly good settings for the work he is on. He said he was



The Cochrane Bridge spares travelers on the Old Spanish Trail the necessity of ferrying across Mobile Bay.

MOBILE

A YEAR before the death of King Charles II precipitated the European War of the Spanish Succession, the French Sieur de Bienville established a colonial settlement on the present site of Mobile. An important pawn in the colonial politics of America, the settlement prospered, grew into a city. Its port served an expanding back country; and under the various flags of France, Spain, England, the United States and the Confederacy, the name of Mobile appeared with increasing importance in the pages of American history.

Mobile is thus a city with an honorable and gallant past; but it is none the less a city of the present. Modern Mobile counts 102,000 inhabitants in its metropolitan area; it is served by extensive railroad lines and by steamship lines operating to all parts of the world; it is the chief city, the distributing and concentration point for a large farming, industrial and resort region.

Cotton is closely linked with Mobile's history, past and present. During the Civil War the city was for a long time the port of entry for numerous blockade runners; and today most of the cotton raised in Alabama is exported through Mobile. The staple varies between $\frac{13}{16}$" and 1¼"; the character is good; and the grade generally high. Stocks at the port reach 500,000 bales at the peak of the season.

Anderson, Clayton & Co. maintain a branch office at Mobile. They also maintain offices at the cities listed below. At all these points the company concentrates large and varied stocks of cotton for immediate shipment to domestic and foreign spinners.

ANDERSON, CLAYTON & CO.

HOUSTON, ATLANTA, NEW ORLEANS, LOS ANGELES, CHARLOTTE, LITTLE ROCK, OKLAHOMA CITY, NEW YORK, BOSTON, MOBILE, MEMPHIS

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DYER'S HELPER

THE basic need in every dye bath is some power or influence which will carry the solution thru and thru the cloth with such perfect circulation the color reaches every particle of every fibre. The dyes are then true to shade, level, brilliant, appealing in their beauty. Goods so distinguished sell better, and bring higher prices. You can obtain such results by using

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COLLOIDAL ALKALI FOR SCOURING AND DYEING

When dissolved, this new substance makes a solution having physico-chemical properties entirely unlike any common alkali. Greater in penetration, more thoro in circulation thru the goods, powerful in dispersing dyestuff thru the solution, this new colloidal-alkali opens new possibilities for the Dyer who wants to produce exceptional dyeing effects

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THE COWLES DETERGENT COMPANY
7016 EUCLID AVENUE . CLEVELAND, OHIO
SOUTHERN DISTRICT OFFICE: 834 HURT BLDG., ATLANTA

making 20s carded yarn from 7/8-inch Middling cotton, with first consideration to breaking strength and second to cleanliness. He said he was carding 120 pounds in 10 hours, and drafting 100 on the card. I differ with him on several points, however.

First, I would prefer a draft of 110 to 120 rather than a draft of 100. The reason being that the sheet of lap being held under the combing action of the licker-in a greater length of time will produce a cleaner web. My experience has been that the breaking strength will not be affected.

I would set the feed plate to a No. 10 gauge, as the licker-in will then take the cotton from the feed plate more even and it will not leave the feed plate in bunches or flakes. If the feed plate is set too far away, the cotton will have a tendency to come off in bunches and flakes and will cause a cloudy web, as the licker-in and mote knives will not be able to do the work they are supposed to do. With such a setting as I have suggested, I do not believe the fibers will be injured by the licker-in where 7/8-inch stock is used.

Where he has the top mote knives set to a 10 gauge and his bottom mote knives to a 7 gauge, I would set both of mine to a 7 gauge. I have found that by setting the first knife as close as possible we don't leave so much for the second knife to take out. If the first knife is not set close the hulls and other foreign matter will have a tendency to wedge into the licker-in wire and be carried by the second knife.

I would set the licker-in to cylinder to a 7, and also set the back plate at the top to a 22 gauge instead of a 17 gauge. If the back plate is set too close, it will have a tendency to press some of the trash into the cylinder wire and the flats will miss this portion. If the plate is set wider the trash will be more inclined to ride on top of the wire where the flats will pick it off.

I would set my flats at all points to a 10 gauge. I have tried the so-called graduated setting and failed to find any benefit. The back flats are the cleanest and also do the most work, so I would set them just as close as the others.

I would set the front knife plate so as to get the desired amount of strips. If it is too far from the cylinder we will get too much good stock in the strips, and if it is too close it will allow too much of the short fibers and impurities to pass into the stock.

I would set the doffer to cylinder to a 7 gauge.

I think "CONTRIBUTOR No. 4967" has his doffer comb set entirely too far away. A closer setting here will prevent the web from following the doffer, and by setting closer it is possible to reduce the strokes per minute. This will save oil, wear and tear caused by vibration of the comb box. Instead of setting to a 34 gauge, I would set to a 17 gauge. This will clear the doffer, and if the web does follow the doffer the tender will have time to find it before the cotton jams the comb blade.

I would set my cylinder screen at the front and center as "CONTRIBUTOR No. 4967" does, but I would set the cylinder screen at the back to a No. 17 gauge.

I think about 48 blows per inch is the correct number of blows on intermediate and finisher pickers.

CONTRIBUTOR No. 5044.

A Method of Handling Bad Work from the Spinning Room.

This discussion should be continued by more readers describing their systems. Let us hear from you.

EDITOR COTTON:

I would like to discuss the control of bad work from the spinning department. We all realize that there will always be a certain amount of bad roving returned to the carding department, and no one will ever be able to entirely overcome this costly evil, but there are ways of reducing the amount.

Each mill has its own system of handling bad work, and I have been with a mill that didn't pay any attention to it at all. Any time any bad bobbins were returned the second or third hand or the oiler would simply cut them, regardless of whether they had one layer of roving on them or were full bobbins.

At our mills we use a system that works very well and keeps our bad work at a minimum. All roving hand marks are marked on top when bobbins are one-half full; speeder tender's marks are on the bottom. We use a stock mark along with the hank mark, for instance, say 1 1/16-inch cotton is called green; 6.00-hank 1 1/16-inch would be marked green and red on top if 6.00-hank happens to be a red mark; or, since 1¼-inch cotton is called yellow, 6.00-hank ¼-inch would be marked yellow and red.

All speeder tenders are instructed how to mark their rovings and are checked by the overseer and second hand.

The bad work is returned each day at a certain time from the spinning department, and is sorted out and laid on a large table by the second hand. After the bobbins have all been sorted the overseer has the speeder tender on No. 1 and No. 2 speeders come to the table and remove her bad work, and she in turn informs the speeder tender on No. 3 and No. 4 to go to the table, etc., until all tenders have their bad work.

A record is posted showing each hand's bad work and if any has too much a red check is put by her name.

The speeder tenders are required to fix their bad work and place it in large cans which are marked for the different hank rovings. When these cans are full the roving is returned to the spinning room and used for changing or on the ends of the frames.

The spinners are paid one cent for every five bunches they find in the roving and one cent for every four singles or doubles. The speeder tenders are fined one cent for every single and ½ cent for every double they make.

We have cards at the end of each frame and the speeder tenders are required to pick out all bunches they find and hang them on these cards. Each day these bunches are picked up and a record kept. The tender having the most is given one dollar extra for the week.

We find most of our bad work is caused from bunches in the roving, and I believe this is the case in most mills.

"We could not run our plant without the MOREHEAD SYSTEM"

—JOSEPH SCHAFER
Boston Laundry
Boston, Mass.

Saves Labor and Time—"We repiped our plant according to Morehead methods," writes this well known official of one of New England's largest laundries. "The improvement and increased production . . . were so marked that we were able to finish our work by Friday afternoon *without* extra help . . . that used to take us till Saturday noon *with* extra help."

Increases Boiler Capacity—"We could not run our plant without the Morehead System, for we would be unable to carry our large over-load even with our efficient oil-burning apparatus."

"Saves 3,000 Gallons of Fuel Oil Per Month"

Consultation with the Morehead Engineer and a survey of your plant involve no obligation. Mail the coupon.

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I'd like to know the experiences of Morehead users, and to find out what Morehead methods can save me.

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One thing we have done to eliminate a few bunches is that four times each day the drawing tenders, comber tenders and speeder tenders have to pick their clearers, tops and unders, and leave the waste on the covers, it being picked up by the section men. By doing this we know that they are picking their clearers, while previously they were apt to let them get too full and some of the bunches go into the work.

CONTRIBUTOR No. 6041.

Causes of Roll Leather Splitting.

In disagreeing with "E. D.", this man says improper treatment of hides can cause this trouble. What do you say?

EDITOR COTTON:

On page 62 of your August issue, you published a discussion from "E. D. (R. I.)" on the subject, "What causes the outside or hair side of sheepskin rolls to come loose from the meat side, sometimes after running a short time?" This subject had been brought up at the semi-annual meeting of the Textile Operating Executives of Georgia, in Atlanta, as reported in your April issue, and "E. D." wrote in to give his opinions on the proposition.

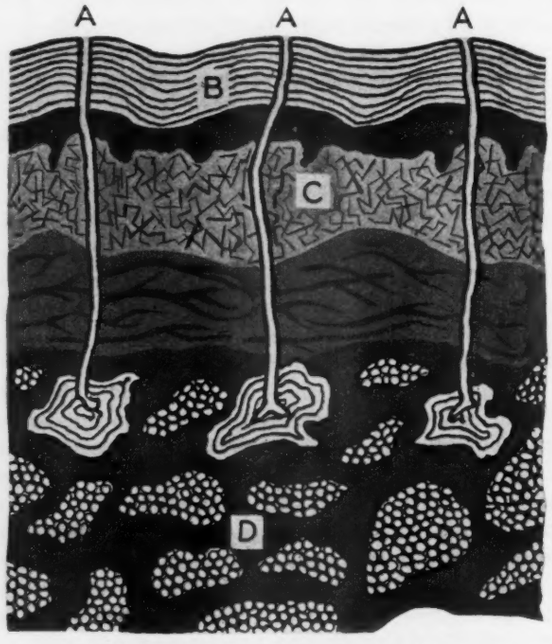
However, after studying his remarks carefully, I found that I must disagree with him. He said, among other things, that imperfect calendering is the cause of the trouble in question. To quote him: "Now, in drawing on, or mounting the cot, it must be clearly understood that it is absolutely necessary to pull the leather on the roll as tightly as possible, and, although the gauge of the length may be correctly adjusted to allow for stretching without damaging the skin surface, the variation in the nature of the leather will cause many cots to receive a certain amount of damage through too much stretching. Why? If you have ever had the opportunity of examining roll leather through a microscope you have probably viewed the surface as having possessed what is called a 'veined' nature, which can be described as looking like veins standing out quite distinctly from the porous tissue which you know leather possesses. * * * In the process of pulling on the cot, when too much pressure or tension is exerted upon the leather, this veined surface bursts open and we encounter a series of scales—a scaly surface."

It would seem to me that "E. D." is all wrong, because what he analyzes is not splitting of the roller skins themselves, but a rupture of the skin. When a skin is not properly conditioned and is drawn on the iron roll too tight, it will invariably rupture the fibers of the skin, on the grain surface. While his remedy of perfect calendering may help, it can never repair the damage caused by rupturing the fibers of the skin.

In my opinion the best solution of this particular trouble is to store the skins in a cool, moist place, before they are cut up. Later, once a skin is cut up and made into cots, these cots should again be conditioned by being placed in a conditioning room with a humidity of some 95 to 100 per cent. This will allow the cots to become soft and pliable and stretch very easily on the rolls, without danger of rupturing the grain. As an illustration, a leather belt will stretch on a damp day, and in some cases it becomes necessary to take the belt up; but once the weather clears and becomes drier, that same belt will contract to the point where it becomes entirely too tight in some cases.

Getting back now to the original question as brought up in the meeting of the Textile Operating Executives of Georgia, "What causes the outside or hair side of sheepskin rolls to come loose from the meat side, sometimes after running a short time?", there are several causes for this condition.

First, a roller coverer will often put entirely too much pressure on the skin while "breaking" it or drawing it around a file or rasp. Damage which can never be repaired is often done there. Secondly, one of the largest tanners of sheepskins for the textile industry—who by the way caters to the business of the world—recently told me that no sheepskin is really fit for roller leather unless it reaches the tannery and gets into the lime bath within 72 hours after the animal has been killed. When delays occur in transportation, or for some other cause, and skins reach the tannery later than they should, decomposition has set in, but not enough to be visible. There is no way to tell how much damage is done, therefore, until after the skin is cut into cots and put on the roller; in fact, put into service. Often, therefore, the cots split and must be removed before they have been in service more than a very short while.



Anatomical Structure of Sheepskin.

A—sweat ducts. B—epidermis, commonly called grain, consisting of a horny layer above and malpighis nets below. C—Fibrous tissue, multitudinous fibers bound together by corinn. D—true skin.

Accompanying this letter is a microscopic drawing of the anatomical structure of a sheepskin, cut parallel with the hair. This is submitted in order

LOOM DANDRUFF

"Loom Dandruff." Shedding from loom showing flaking-off caused by over cooking of the starch granules (highly magnified).

Is Your Weave Room Afflicted?

See Our Cure for "LOOM DANDRUFF" IN Booth No. 440

Automatic Temperature Recorder-Controller

The dandruff like particles that settle around your looms are a sure sign of poor slashing. This shedding of the size is costing you real money.

"Loom Dandruff" is caused by over or under cooking the size or by over drying the yarn.

Look to your slashers! Temperature control will banish "Loom Dandruff". Accurate Foxboro Temperature Controllers hold the temperature just where you want it. It means fewer breaks on the loom. Automatic control on slashers should pay for themselves in three months.

If we can analyze your problem, we will guarantee results and savings.

We have some interesting data on slasher operation. One of our engineers will be glad to show it to you. Write today.

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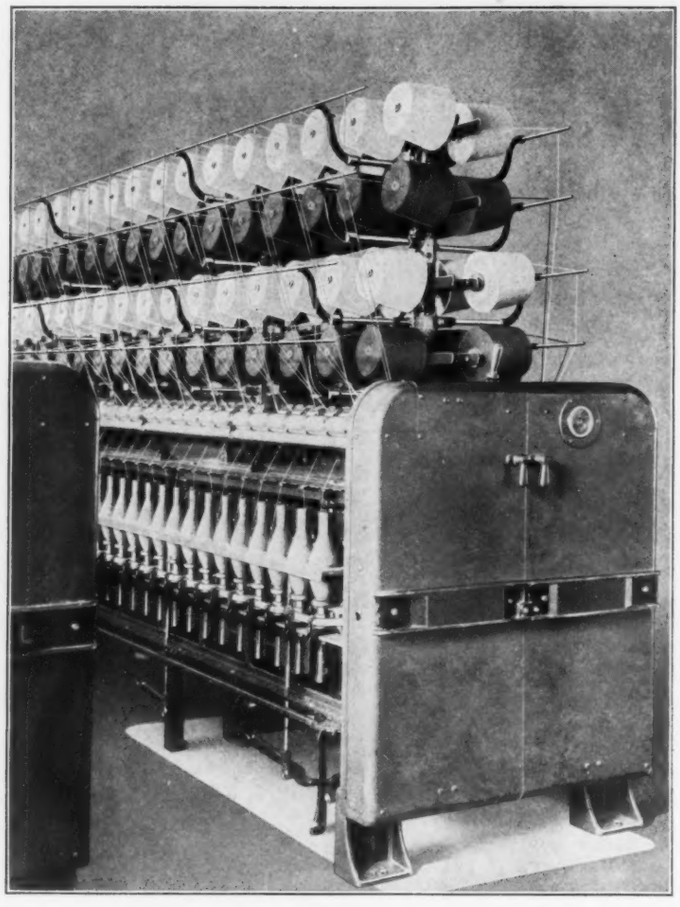
TWISTING FROM CONES

There are many advantages in the use of cone supply on twisters

LEESONA



LEESONA

IN twisting yarn drawn from rotating packages, either spools or tubes, there is much variation in the tension on the yarn as between a full sized package and a small package, whereas in drawing over-end from stationary cones the stress on the yarn is the same whether from a full cone or one that carries a small quantity of yarn.

Practical results in mills have shown a substantial improvement in the quality of twisted yarn, there being less variation in the twist and greater strength uniformly in the yarn.

UNIVERSAL WINDING COMPANY
BOSTON

333

UNIVERSAL WINDERS

that the readers may more fully appreciate the following remarks:

Though the wool has been removed, there still remains a fine growth of hair which can only be cleared away by immersing the pelts in lime water for a period of time. From this liming, they pass through chemical baths to neutralize the lime. This is subsequently expelled from the skin, together with all extraneous matter, by an operation known as scudding. This process is very complicated both chemically and mechanically, requiring great care, thought and attention; standing in its relation to roller leather as a good foundation does to a building. If this operation is badly performed, there are no known means of remedying the effects. Referring to the sketch, it will be noticed that the grain is bound to the fibrous tissues by a soft gelatinous substance called corinn. Should this substance be improperly treated during manufacture, such as by imperfect neutralization of chemicals and removal of the lime, hollow and loose skins will result.

In my opinion, especially in the present critical times, many superintendents are trying in every way to cut costs everywhere possible, have gone entirely too far. The majority of mills patronize the public roller covering shops. They are continually insisting on the coverer furnishing rollers at ridiculous prices which mean only one thing, that a cheap skin must be supplied. The coverer, therefore, furnishes the hollow, loose skins.

In my opinion, low priced roller cloth and roller skins are a mistaken economy. The very best all-wool cloth obtainable, together with the finest skins to be had, are both equally essential to economy and good work.

CONTRIBUTOR NO. 6150.

Advocates Backing Doffer Off While Grinding.

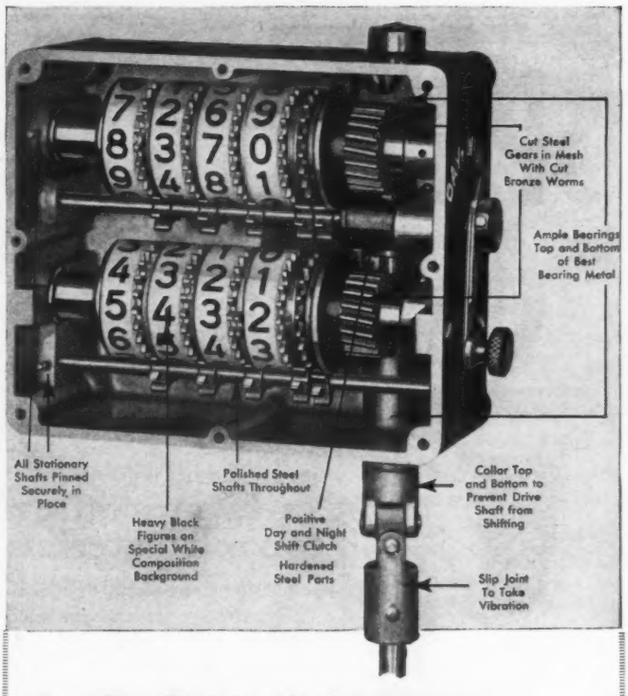
EDITOR COTTON:

I saw on page 87 of the May issue a letter from "C. R. D. (N. C.)" with regard to backing off the doffer for grinding. In that letter he replied to a man who had criticized this idea.

I am inclined to agree with "C. R. D." The backing off of the doffer to a full gauge for grinding is a good precautionary practice with many first-class card grinders, and it is even compulsory with a good many good card room overseers.

I am not saying that this practice is absolutely necessary, because the grinding can be done without backing off the doffer. But true is the old saying that a stitch in time saves nine. The high speed with which the doffer is run during the process of grinding tends to cause an expansion of the clothing on the doffer; or in other words if it were possible to gauge between the doffer and the cylinder while in motion during the process of grinding, no doubt there would be a surprise for many men. But don't ever try it, for it can't be done.

For an explanation in regard to the possibility of the expansion of the clothing on the doffer and cyl-


Cut Steel Gears in Mesh With Cut Bronze Worms
Ample Bearings Top and Bottom of Best Bearing Metal
All Stationary Shafts Pinned Securely in Place
Heavy Black Figures on Special White Composition Background
Polished Steel Shafts Throughout
Positive Day and Night Shift Clutch
Hardened Steel Parts
Collar Top and Bottom to Prevent Drive Shaft from Shifting
Slip Joint To Take Vibration

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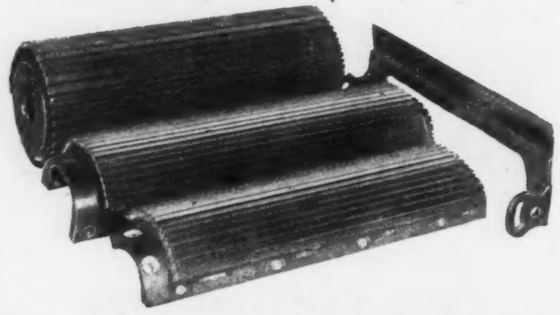

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inder as the speed is being increased, I am sure that a good many of us have stood and listened while the pickers were being started. How faint the hum of the beaters was at its starting point and how the hum continued to increase as the speed was increased until full speed was obtained, when it became one continuous hum. So it is with the clothing on the doffer and cylinder. At the starting point the tendency for the clothing to expand is slight, but as the speed of the doffer and cylinder is increased the greater becomes the tendency for the clothing to expand, and it becomes greater and greater until full speed is obtained—then it becomes one continuous circle.

In conclusion, let me say that carelessness is often dangerous and expensive. It pays to be careful.

U. M. (N. C.)

"M. W. H." Wants More of You to Join the Combing Discussion.

Come on in, and make the discussion more lively by giving your views.

EDITOR COTTON:

It seems strange that more comber men do not enter into a discussion of combing in COTTON, because there are many comber experts, and it has always been my observation that they have varying views regarding combing. For instance, I dare say, a comber could be put up in a hall and one comber man told to set and time it for a given stock to obtain a given result to make the best work possible; when he got the comber running to his satisfaction, if another comber man were turned loose on it he would without doubt snicker and say, "All wrong." Tell him the same thing you told the first man and he would get his wrenches and gauges and change the comber all over. When he got through, if each man was handed a sample of the comber sliver made in each test he undoubtedly could not tell which he made, as one would be equally as good as the other.

Of course, this might apply to any machine in the mill, but a comber is a little more sensitive or a little more responsive to a man than all the others, excepting the old mule or perhaps a Jacquard loom. No doubt the reason for this condition is the fact that there are so many moving parts that are all interdependent on each other in doing their work. Discussions of the machine and its operation will bring out ideas that may make just a slight change somewhere which will change the whole result, and it seems as though more men should get aboard.

Starting back in your October 1931 issue (page 1165) when you published a discussion on combers by me, you have had a rather lively discussion between me and "R. G. (R. I.)" on the subject. Your December 1931 issue (page 1353) carried a criticism of some of my statements from "R. G.," and I replied on page 79 of the March 1932 issue. I wrote again on page 80 of the May 1932 issue; and then on page 65 of the July issue, "R. G." replied to my March article.

A prolonged discussion by two men keeps narrowing down to such a fine point that nobody benefits by

it. However, I want to comment now on his July article, repeating the suggestion that other comber men review the discussions I have just listed, and join in with us.

In his July article, "R. G." has agreed with me on all of the important statements, but I dare say he has not changed his ideas of a comber one bit. This is as it should be, for I know that I cannot tell him how to run his combers, but "R. G." knows and I know that we have both benefited by discussing this subject. It really doesn't matter where the heart of all settings is, so long as you have a heart to start from. "R. G." says the steel detaching roll should be the heart of all settings. I will agree with him. That must be the starting point, but I do not know of any setting for this roll, and that is why I made the statement that the cushion plate to half lap was the heart of setting. I might have said that it was the most important setting. All you can do with your steel detaching roll, that I know of, is to set it in the bearings—being sure these bearings are in line—and that the roll turns freely when the caps are on. That is the starting point in setting, and most comber men set most of the comber from this roll, either directly or indirectly.

In the third paragraph of "R. G.'s" July criticism, he says, "It is always the nipper knife that is timed, and the cushion plate gets its motion from the nipper knife." On a Model D-2 Whitin, the cushion plate is immovable and gets no motion from anything. That is just the point I have been trying to emphasize: that a comber with a movable cushion plate is capable of making better work than one with a stationary plate. I always supposed that the swinging motion of the cradle counteracted to some extent the imperfection of the cushion plate setting.

In the fifth paragraph he says, "I will admit that the Heillman comber makes a better piecing than the Whitin D-2, but I hope 'M. W. H.' will take into consideration the speed and production of the two types," etc. That is just what we do *not* want to consider as there is no argument there. I know that the extra production and lower first cost offset the difference in quality to a mill, but this discussion was started to make perfection, or as near it as possible.

Why does the Heillman make a better piecing? I have said it was because the cushion is movable. If this is not so, why is it? I have already intimated—and will go further and say that I sincerely believe that a comber with a stationary cushion plate can be made to produce as good work as the other type, and at the same time maintain its high production. The only trouble is to get a good piecing up. I have not, "R. G." has not, and no one else that has so far entered into any discussion of combing that I know about, has ever made as good piecing on a stationary plate as on a movable plate. This fact does not necessarily mean it can't be done. I have worked on the theory of making that setting of the cushion plate perfect, and filing or milling the stand is one remedy I tried. Of course the plate must be made stationary and be pinned after it is fitted, so the nipper knife cannot push it out of position.

As far as the cushion plate itself is concerned, I doubt if the Heillman is much better than the Whitin D-2, but it offsets its own difficulties by being movable

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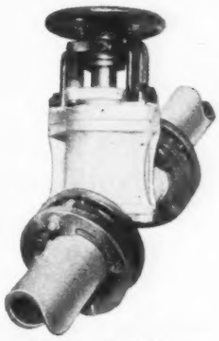

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AT THE SOUTHERN TEXTILE SHOW *By Nelson*

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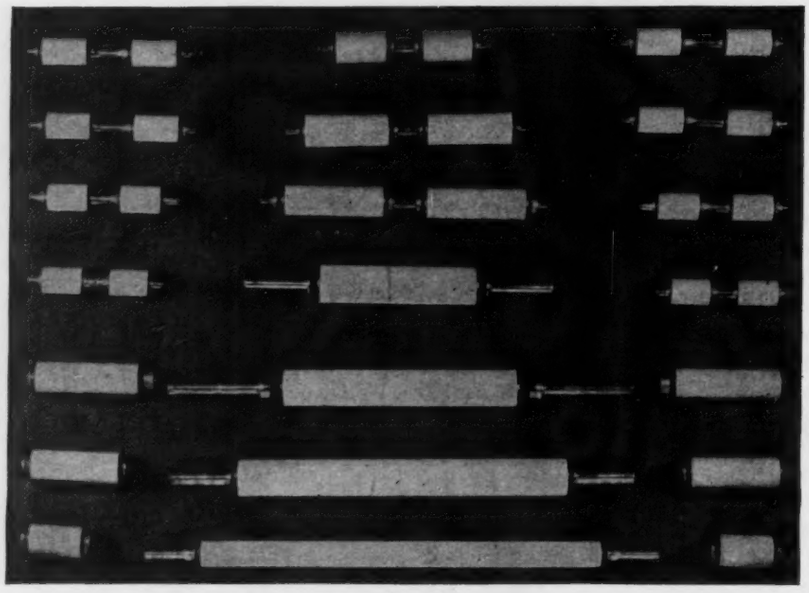

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and also being in a lower speed comber. Any machine that runs at high speed must be more perfect than one running slower, else it will not run as well. Our problem is to get the product, maintain the quality, and preserve the machine. I think it was "CONTRIBUTOR No. 5070" that asked for a remedy of this setting (wonder why he doesn't join this discussion?) and I have given mine; "R. G." seems to think it doesn't matter anyway because the quality is good enough; and the rest of the comber men will have to wait for the coming of the dawn or figure it out for themselves. If anyone does find a remedy I hope he will communicate it to the Editor of COTTON, for I feel sure he will get it over to the rest of us.

M. W. H. (MASS.)

Eliminating Neps in Carding.

EDITOR COTTON:

In response to "CONTRIBUTOR No. 6046", who is having trouble with an excessive amount of neps at his cards, from Middling cotton.

The best way for a man to eliminate this trouble is to make a personal inspection of all of the settings of the machines in the opening, picking and carding.

First, start at the vertical opener, as there are several things that might cause cotton to be curled at this machine. If your contributor is satisfied that he is not crowding the cotton through this machine, then let him examine the perforated screens and the exhaust outlets to see whether they are stopped up with dust or lint, because if they are, this will cause a back draft and prevent the proper amount of suction to pull the larger tufts of cotton from the upright beater. This will cause the beater to be continuously crowded and the result will be curled stock.

After the vertical opener has been checked, then look at the breaker picker. Set the beater as follows: Place a rule 3/16-inch thick against the feed roll in a vertical position and set the beater so that the blades will just nick the side of the rule when passing the feed rolls. Set the grid bars ¾-inch at top and 1-inch at bottom with a beater speed of 1,000 r.p.m.

For the finisher picker, put an ordinary four-leaf card gauge against the feed roll in an upright position and set the beater in the same manner as was used on the breaker picker. Set the grid bar ½-inch at top and ¾-inch at bottom, with a beater speed of 1,000 r.p.m.

Then make a personal inspection of one card. First examine licker-in and mote knives to see that they are in good condition. Then examine the flat wire and see that it is tight and sharp, because sharp flats play an important part in good carding. Next examine the cylinder and doffer clothing to make certain that it is tight and sharp, because loose card clothing will surely cause a cloudy web.

Then adjust every setting point to the machine builders' rule. I would not advise setting the flats to a 7/1000 gauge, because it takes a first-class card grinder, with modern conditions, to accomplish this succesfully. However, I would be sure to set the

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LEATHER BELTING
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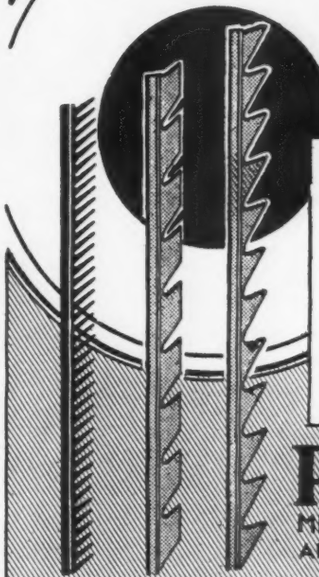

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Perfect length control and no creeping or pinching of flanges
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Perfectly centered
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Entire strain on 3" ground taper like shank of reamer tail stock, auto axle, etc. Contact surface complete at all points
Greater strength, no swelling of flat boss or loose necks

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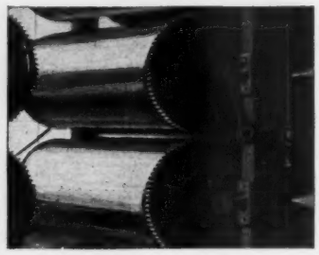

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doffer to a 7/1000 gauge, as this will keep the cylinder from becoming overloaded between strips.

It is not advisable to set the doffer comb closer than a 22/1000 gauge, as a close setting at this point will cause the foreign matter to be combed from the doffer into the web.

Now, let us go back to the vertical opener and feed just enough cotton through to supply one breaker hopper, making four breaker laps to weigh 45 pounds net each, and putting these four laps on the finisher apron to make one 42-pound lap net weight. Take this lap to the card which has been set up and run it through and I believe the results will be satisfactory.

T. R. (N. C.)

Says Spindle Load Does Not Cause Twist Variation.

Readers interested in this subject will be furnished copies of some valuable tests concerning it upon request.

EDITOR COTTON:

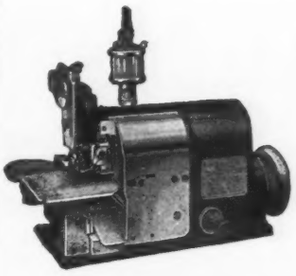
Referring to the letter of "T. G. (GA.)" at the bottom of page 64 in the July issue, I will not endeavor to answer the question as to whether the traveler or the spindle puts twist in the yarn, but I do disagree with "T. G." as far as the same twist being put in on a full bobbin as when first started, whether band or tape drive.

He claims that due to a larger or heavier load on a full bobbin, that the bands slip. They should not do so, if put on right, as the spindle is encased in a bushing and is free running, and should be immune to vibration or any slippage due to load.

I have taken thousands of spindle speeds, both tape and band drive, and will agree that tape driven frames make evener yarn, but the fault is due to slack bands, not the load on the spindle. I have found that the best remedy for slack bands is to have one man put on bands and for the spinners and section men to have the authority to cut off all slack bands they may come across.

I do agree with "CONTRIBUTOR No. 4978," who said in an earlier issue that there is more twist at the top of a filling wind bobbin and on the larger diameter of a warp wind bobbin than when either is first started, for the reason that there is a shorter distance of yarn being twisted, the traveler does not have the same tension, the speed of the rolls and spindles remain the same as when the bobbin was just started; therefore common sense tells us that there must be more twist at this point than when first started. Just how much, we do not know, we could possibly take the twist on various bobbins to determine this, but the men who can take first twist and determine to an accuracy how much difference there will be are few and far between, unless, however, one man spin a colored and a white roving together, and on taking the twist can determine when both yarns are parallel that the twist has been removed. I believe if "T. G." will do this he will find an answer to his subject and that he will also find more twist on a full bobbin than on one just started.

W. B. (MASS.)



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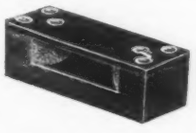
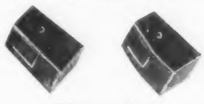


Heavy Loom Picker

Picker for C & K Loom

Picker for Box Loom

Doll Picker for C & K Loom



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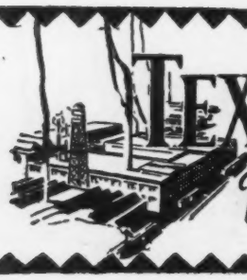

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The booklets or catalogs briefly mentioned below may be obtained by any readers of COTTON who will write to the Company issuing them or to COTTON, Grant Bldg., Atlanta, Ga.

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55. **Interpretation of Analysis for the Layman**—An eight page booklet explaining what the various terms used in fatty oil and sulfonated oil analysis mean, enabling the ordinary textile man without chemical education to interpret the various chemical analyses. National Oil Products Co., Harrison, N. J.

56. **Technical Service Data**—giving information on processes of textile manufacture in the use of oils, softeners, etc. National Oil Products Co., Harrison, N. J.

57. **Reducing Textile Costs and Troubles** telling all about the benefits of water treatment. Permutit Co., 440 Fourth Ave., New York, N. Y.

61. **Belt User's Book**—76-page book with suggestions, rules, tables and charts helpful in the purchasing, application, use and care of belting. J. E. Rhoads and Son, 35 North 6th Street, Philadelphia, Pa.

62. **Rubber Products for the Textile Industry**—a 40-page booklet giving a wealth of information on the proper selection, installation and operation of rubber belts, together with charts showing horsepower rating, pulley sizes, V-belt sizes, also information on all types of hose and rubber covered rolls used in the textile industry. Manhattan Rubber Mfg. Division of Raybestos-Manhattan Inc., Passaic, N. J.

63. **S-W Paint Standardization Plan**—valuable booklet telling how protective coatings can effect economies in plant operation and maintenance, describing how each surface is finished to best meet its specific needs, giving ideal lighting and sanitary conditions and economies in increased production. Sherwin-Williams Co., 601 Canal Rd., Cleveland, Ohio.

64. **Efficiency and Performance of SKF Boller Bearing Spindles**—A twelve page booklet showing the advantages in power consumption, increased production, savings in lubrication, increased yarn breakage strength to be secured through roller bearing spindles. SKF Industries, Inc., 40 East 34th St., New York, N. Y.

65. **Why Cooper Hewitt Light is Better Than Daylight**—a 16-page booklet explaining in detail the importance of good lighting and the necessity of proper quality as well as proper quantity of light. General Elec. Vapor Lamp Co., Hoboken, N. J.

66. **Dronsfield's Patent Portable Auto-Feed Needle Point Grinder No. 176,** describing a new departure in card grinding—John Hetherington & Sons, Inc., 250 Devonshire St., Boston, Mass.

67. **Specification and Size book, I-31,** convenient reference book giving complete information and prices on Rockwood Short-Center Drive for textile machines. Rockwood Manufacturing Company, Indianapolis, Indiana.

68. **Rockwood Pulley Specifications,** a reference booklet giving complete specifications of 2,540 stock sizes of pulleys. Rockwood Manufacturing Company, Indianapolis, Indiana.

69. **Monel Metal Equipment for the Textile Industry**—a 50-page buyer's guide and catalog with more than 100 illustrations of various items of monel metal dyehouse equipment. International Nickel Company, Inc., 67 Wall St., New York, N. Y.

70. **Fafnir Ball Bearings for One-Process Pickers**—outlining the advantages of ball bearings in guaranteeing smooth accurate motion particularly on eveners, as well as uninterrupted production, ease of operation and cleanliness of bearing units throughout the one-process pickers. Fafnir Bearing Company, New Britain, Conn.

71. **Short Cuts to Power Transmission**—A 74-page handbook for belt users, incorporating the most important phases of practical belting practices, including considerations in belt buying, care of belts, making belt joints, belt calculations, causes of belt troubles, etc. Flexible Steel Lacing Company, 4619 Lexington Street, Chicago, Ill.

72. **The Merrow Butted Seam**—A 16-page booklet defining and illustrating the Butted seam, describing its properties and outlining some of the advantages to be gained by its use in textile fabrics. The Merrow Machine Co., Hartford, Conn.

73. **New Reeves Catalog T-32**—A treatise on efficiency speed control—including valuable information of special importance to textile industry men and production executives outlining advanced methods of speed regulation. Reeves Pulley Company, Columbus, Indiana.

74. **Colgate-Palmolive-Peet Bulletin No. T-22**—booklet giving complete details of degumming and dyeing in a single bath with soap. Colgate-Palmolive-Peet Co., 919 North Michigan Ave., Chicago, Illinois.

75. **The Facts About Armstrong's Seamless Cork Cots**—A helpful book containing plain facts, cost studies based on actual mill records, expert analysis, complete details on the advantages of Armstrong's Seamless Cork Cots. Armstrong Cork Company, 923 Arch Street, Lancaster, Pa.

76. **Jointite Cork Products**—Giving information on the uses of cork for insulation purposes, including useful data, specifications, tables, and charts for roof insulation, refrigeration, sound-proofing, heat prevention, heat conservation, vibration deadening, and condensation prevention. It contains concise and valuable data on all of these subjects, as well as photographs and drawings showing specific examples of various types of construction, test curves, etc. Copy sent free to anyone interested in any of these subjects. Mundet Cork Corp., 450 Seventh Ave., New York, N. Y.

77. **Bulletin T 200**—Illustrating and describing the new Reeves Variable Speed Drive for spinning and twister frames, explaining its many distinct advantages, and giving charted results of exacting tests. Reeves Pulley Company, Columbus, Indiana.

78. **Booklet L 1289 A, Loom Motors and Control**—giving details of the low installation, operating and maintenance cost of Westinghouse Loom Motors. Westinghouse Electric & Manufacturing Company, Room 2 N, East Pittsburgh, Pa.

79. **Diamond Alkali Handbook**—Containing useful information relative to Soda Ash, Caustic Soda, and Liquid Chlorine. Diamond Alkali Co., Koppers Bldg., Pittsburgh, Pa.

80. **Alkaline and Other Detergents**—a twenty page booklet on alkaline and other detergents and their function in textile processing and general cleaning operations. Diamond Alkali Co., Koppers Bldg., Pittsburgh, Penna.

83. **Leather Belting**—"The Belt That Puts The Pull in the Pulley"—an 80 page handbook on the selection and operation of leather belting, giving horsepower tables and many pages of useful engineering data, by E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

84. **Stock Lubricants**—How to select, mix and apply the proper lubricant for any type of stock is told in this 84 page booklet "Houghton on Woolen and Worsted Stock Lubricants", by E. F. Houghton & Co., 240 W. Somerset St., Philadelphia, Pa.

87. **Morehead Back-to-Boiler System**—An interesting 44 page booklet, giving helpful information regarding the Morehead Back-to-Boiler System. Morehead Manufacturing Co., Department C, Detroit, Michigan.

1. **Cotton Picking, Carding and Spinning**—Covered by three different catalogs. Picking catalog covers Opening and Picking Machinery; Card Room catalog covers Cards, Combers and Roving Frames; Yarn Machinery catalog covers Spinning, Twisting, Spooling, Quilling and Reeling. By Whitin Machine Works, Whitinsville, Mass.

2. **Pepperell Equipment**—10 page illustrated booklet, showing High Speed Warping from cones as adopted by Pepperell Manufacturing Company after thorough experiments, installation and product photographs. Issued by Universal Winding Company, Boston, Mass.

4. **New Methods of Opening Cotton, also "Brown" Automatic Mixing and Cleaning Distributor**—Illustrated booklets showing advantages of Centrif-Air Cotton Cleaning System. Pamphlets also on better picking and carding and pneumatic trunk line cleaner. Issued by Centrif-Air Machine Company, Atlanta, Ga.

8. **"Textile Brushes"**—10 page booklet illustrating brushes for cleaning every part of mill. By Gastonia Brush Co., Gastonia, N. C.

10. **Leathers, Textile**—Booklet No. 101, 48 pages. Illustrated. Showing BONDARON Check Straps—Lug Straps—Harness Straps—Pickers—Belting, both round and flat, etc. Horsepower tables and other interesting information. By Charles Bond Company, 617 Arch Street, Philadelphia, Pa.

11. **Whitinsville Rings**—16 page illustrated booklet. Describing ring manufacture, measurements, types, uses. How to determine flange sizes. By Whitinsville Spinning Ring Co., Whitinsville, Mass.

15. **The Powers System of Thermostatic Control**—"Slasher Room is Bottle-Neck of Textile Mill." 18 page illustrated booklet showing importance of proper treatment of cloth in slasher room and advantages of Thermostat over hand control. Also room temperature control illustrations. Issued by Powers Regulator Co., 2739 Greenview Ave., Chicago, Ill.

20. **Bleaching, Dyeing, Finishing and Printing Textile Goods**—70-page booklet containing interesting information on faults and methods in finishing goods, useful tables and definitions. By Bosson & Lane, Atlantic, Mass.

21. **Warp Sizing and Composition of Cotton**—Folder containing reprints of articles carried by textile publications of interest to progressive mill superintendents. By Seydel-Wooley Co., 748 Rice St., Atlanta, Ga.

22. **Tragasol and Its Uses**—Booklet, 60 pages, constituents and properties—Dissolving and preparation—sizing and dressing of yarns—cloth finishing—miscellaneous. By John P. Marston Co., 247 Atlantic Ave., Boston, Mass.

23. **Practice of Rayon Sizing in American Mills, Raygomm, Lakoo Gum**—Three booklets on products for sizing and finishing rayon and other textiles, presented by Stein Hall & Co., Inc., 285 Madison Ave., New York, N. Y.

25. **"Lupogum" and "Monopole Oil"**—Two booklets on textile sizing and finishing products. Jacques Wolf & Company, Passaic, N. J.

28. **Akron Belting.**—Practical rules and general information for users of belting with belting catalog. By Akron Belting Co., Akron, Ohio.

29. **Continuous Card Stripper**—A 20 page booklet describing in detail continuous card strippers, their advantages, the power required to operate, etc. Saco-Lowell Shops, 147 Milk St., Boston, Mass.

30. **Lubrication of Textile Machinery**—32 pages, illustrated. Data covering the economical lubrication of all textile machines. New York and New Jersey Lubricant Co., 292 Madison Ave., New York, N. Y.

38. **Sleaziness in Full Fashioned Knitting**—Illustrated survey with samples of fabric showing causes of sleaziness and methods to be employed in eliminating it.—By Textile Machine Works, Reading, Pa. (This company also issues parts catalog for Reading full fashioned machine with general information on subject of full fashioned knitting.)

41. **Budget Control**—40-page booklet showing how each part of business budget should be prepared and principles of its effective operation together with a summary of benefits. By Ernst & Ernst, accountants, 27 Cedar Street, New York, N. Y. (This company also has available booklets on Standard Costs, Business Control Through Analysis, The Better Wage, Factors to Consider in Working Out Mergers.)

42. **Textiles and the Telephone Typewriter**—6 page booklet on telephone typewriter service for communication between mills and selling houses. By American Tel. and Tel. Co., Long Lines Department, Atlanta, Ga.

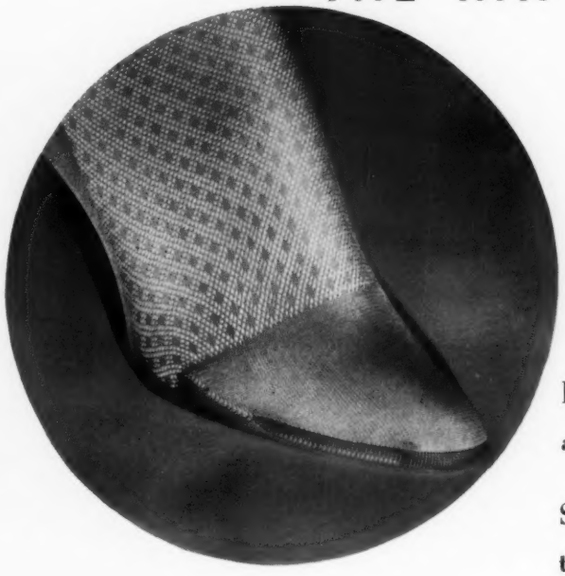
44. **Points of Interest in and Around Atlanta**—36 pages. Illustrated, describing places of scenic and historic interest in Atlanta in particular, and the Southeast in general. Atlanta Biltmore Hotel, West Peachtree, Fifth, Sixth & Cypress Sts., Atlanta, Ga.

45. **Fidelity Universal Ribbers**—A forty-eight page booklet showing the advantages and many styles of ribbed fabric and describing in detail and illustrating the latest developments in ribbers. Sent free on request by Fidelity Machine Co., 3903 Frankford Ave., Philadelphia, Pa.

KNITTING SECTION

fits

THE WAY A GLOVE fits



It's a whole sales story in itself, this "Gussetoe"... and one worth claiming for your product.

Smooth fit, because of an actual gusset knitted in as the stocking is made (not seamed, you see). Like the gusset in a glove finger, it gives "depth"... another dimension; and there you have conformity to the human foot ... smoothness without strain.

With a Scott & Williams machine, this story is yours. The "Gussetoe" is an exclusive feature. Capitalize it!

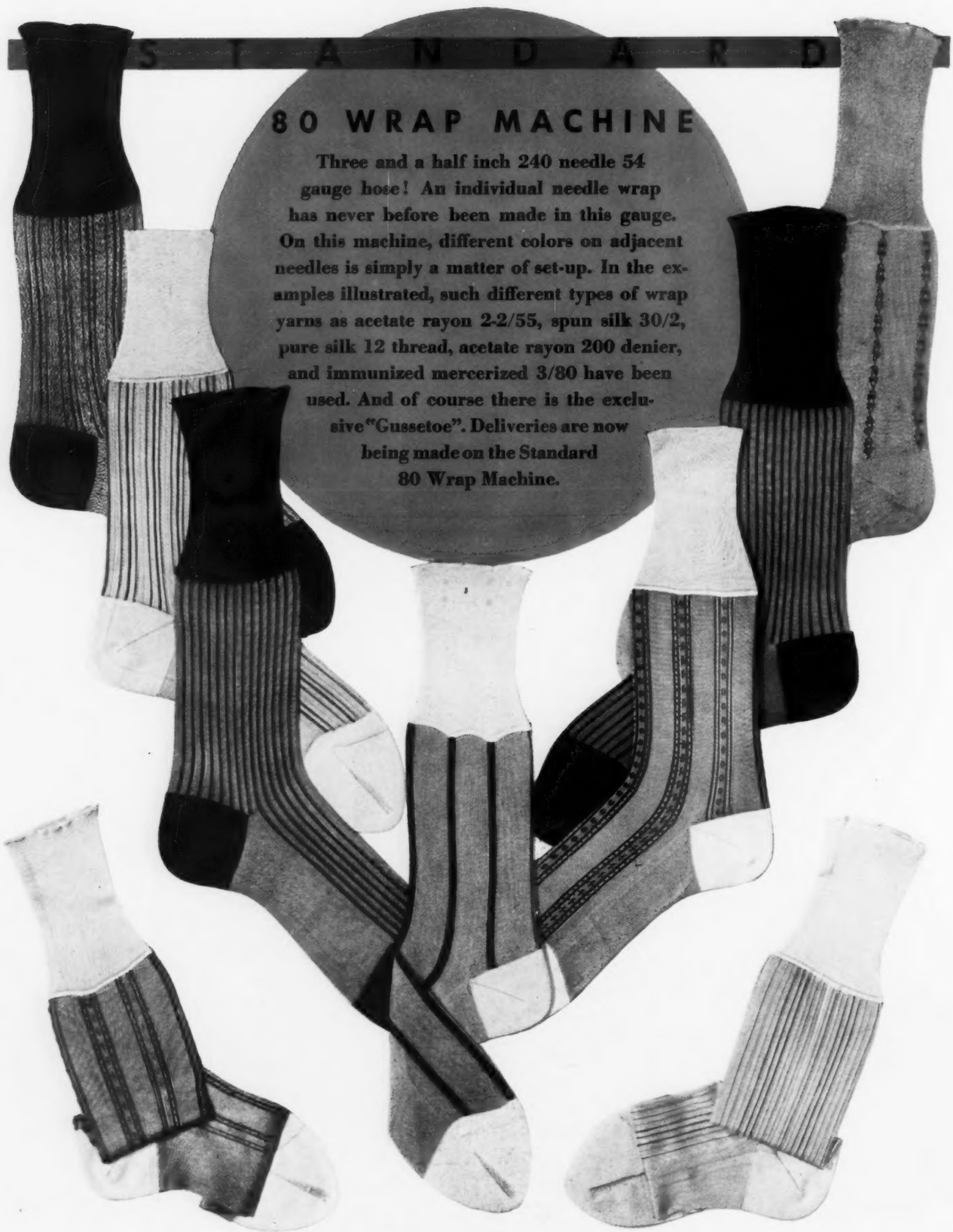
"This is the Scott & Williams Machine Age"

ESTABLISHED 1865

SCOTT & WILLIAMS

INCORPORATED

366 BROADWAY, NEW YORK, N. Y.


S T A N D A R D
80 WRAP MACHINE
Three and a half inch 240 needle 54 gauge hose! An individual needle wrap has never before been made in this gauge. On this machine, different colors on adjacent needles is simply a matter of set-up. In the examples illustrated, such different types of wrap yarns as acetate rayon 2-2/55, spun silk 30/2, pure silk 12 thread, acetate rayon 200 denier, and immunized mercerized 3/80 have been used. And of course there is the exclusive "Gussetoe". Deliveries are now being made on the Standard 80 Wrap Machine.

STANDARD-TRUMP
BROS. MACHINE CO., INC.
366 BROADWAY NEW YORK, N. Y.
Established 1872

Is a Laboratory a Necessity in a Hosiery Dyehouse?

By Noel D. White

IN this day of efficient competition in all branches of industry, when a few cents' difference in the cost of manufacturing will decide if the finished articles can be sold at a profit or wind up on the wrong side of the ledger, the science of chemistry has come to be classed as the most important factor in every industry, whether it be packing meat, smelting metals, or converting fibers into wearing garments.

Up to a few years ago very few textile manufacturers thought a chemical laboratory was necessary to carry on his business of weaving cloth or knitting hosiery, or dyeing and finishing fabrics. That was primarily because most of the research and laboratory work was done by some central bureau and the findings adopted by the most progressive manufacturers, and also because most of the work in the factory was done by rule-of-thumb. Trade secrets and mode of procedure had been handed down from father to son for generations and chemistry proper was yet regarded as something magical and studied only by the few alchemists whose chief aim was to convert the baser elements into gold.

Today, however, that order of things has changed, rule-of-thumb cannot find a place in the modern factory. Chemistry has ruled out secret trade formulas. Its findings are public property. Every progressive school in the country has chemistry on its curriculum, and every year batches of young and eager graduates rush into the industrial plants of the country to find their places, and what was once regarded as an expensive luxury is no longer regarded in such a light. A laboratory under the supervision of a competent man is now a necessity in every industry, and the textile mill owner who refuses to recognize that fact cannot possibly hope to be able to compete successfully with his more progressive competitor.

What a Laboratory is For.

When dyeing was done with barks, flies, minerals, etc. the dyer's laboratory was a large storage room where he prepared his ingredients as he had learned to do, without giving a thought about the chemistry involved in the preparation. He knew he had to steep his natural coloring materials so long to get the most out of them. Beakers and test tubes, if he had any, were seldom used. Baume' and Twaddle hydrometers were sometimes found useful, and used to test the specific gravity of baths, and thermometers did not mean a thing because the dyer trusted the sensitiveness of his hand in taking the temperature in his dyeing vats. Scales and balances were only used to weigh heavy materials, and even after synthetic dyes and coal-tar colors were brought to the dyer it was a long time before he came to realize that he could do his work with more accuracy, and duplicate results easier, by taking notes of what entered in his dyeing baths and weighing his dyestuff carefully at all times, instead of taking it with a spoon and dropping it in the dipper or kettle to dissolve in a haphazard way, trusting his eye to do his weighing and matching for him.

The laboratory of a well-known southern full-fashioned hosiery concern.

With a laboratory in which to do his matching of shades he can make tests to determine the amount of each different dyes it will take to produce a shade on a small skein of any fiber, or in a swatch of cloth, a piece of knitted goods or stocking, and when the correct shade is obtained he can figure out by proportion in percentage how much is needed for a lot of the same material in 25 pounds, 50 pounds, or any amount he may have to dye in one batch. He may have to correct his laboratory test somewhat when applied to practical dyeing on a large scale, but after one or two corrections he will have a dyeing formula correct for future orders.

Considering the working meth-

Big News

THE AMERICAN WEEKLY
Greatest Circulation in the World
tells American Women about
CHARDONIZE
the original dull lustre synthetic yarn..
A nation-wide advertising campaign for stockings-underwear
1st Advertisement October 30th
It's in the yarn

New Selling Support for CHARDONIZE

To further your success in distributing popular priced stockings and underwear of Chardonize dull lustre yarn, we contribute an advertising campaign. Appearing in the magazine with the greatest circulation in the world, it will reach women in almost every section of the country.

TODAY the fame of Chardonize is nation-wide. Merchants have advertised it. Manufacturers have used the name on labels to identify their merchandise. Millions of women know the story of quality it tells. ● This Fall we are clinching this national acceptance—giving real help to every merchant and manufacturer with stockings and underwear of Chardonize to sell. We are reminding some 10,000,000 women that Chardonize is the *original* dull synthetic textile. That Chardonize has been tested and approved by women everywhere. That Chardonize has been fully developed over a period of years. That Chardonize dull lustre is Fashion's favorite in 1932. ● If you retail or manufacture hosiery and underwear of Chardonize—*labelled Chardonize*—you will be among those who can benefit directly from the American Weekly campaign. Remember, the first advertisement appears on October 30. Don't miss it. Play Chardonize hard. Cash in with the *original* dull textile... whose quality and salability have been tested *in mill and market.* ● *Tubize Chatillon Corporation, 2 Park Avenue, New York City. Makers of viscose, nitrocellulose and acetate yarns.*

Tubize

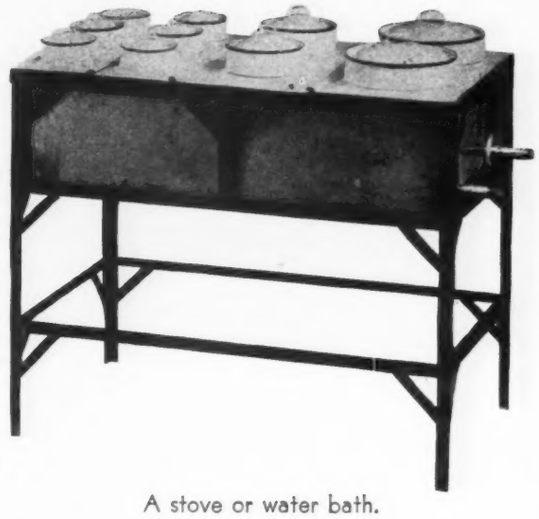
ods of the present time a laboratory will very soon pay for itself, if a competent man is in charge of it, by making accurate tests of value in all dyestuffs and chemicals that are brought to the attention of the dyer. New dyestuffs are continually brought out by the manufacturers. Each new dye is supposed to be a good addition, or a better substitution to one of the already numerous dyestuffs in use. It may be a better color that will dissolve easier or dye more level than its predecessor. Its tinctorial strength may be greater. If brought directly to the dyehouse it may be proved that some feature of it may counteract some of its good points in other respects, and cannot be adaptable to some work and possibly do some damage. When given a few trials in the laboratory its value may be ascertained, and then it may be tried in a practical way before being finally accepted as a good adjunct to the dyestuffs stock-room, or discarded as not suitable, and this applies also to the number of new chemical compounds, soaps, oils, finishes, that are continually worked out, trying to find a place in an already overcrowded market. If not given a trial some really good, worth-while product may be passed by, and the factory handicapped in favor of its more progressive competitor.

That is what a laboratory for a dyehouse is for. To devise formulae for new shades to keep abreast with the continually changing fashion. To test new dyes and chemicals for quality and value;to find the causes of defective work, the variations of mechanical as well as physical structure of fiber and fabric. To try out remedies for damaged goods on a small scale before risking a whole lot guessing on the outcome with uncertain methods, waste of chemicals, and loss of time, not to mention the worries of the dyer having to work in a hit-or-miss sort of a way.

Equipment of a Laboratory.

How to equip a laboratory is more or less a matter of judgment, and also of how much money one cares to invest in it. A large elaborately equipped laboratory is not necessarily needed for the average dyehouse. A few well chosen pieces of apparatus consisting of the essentials necessary for testing dyes and making swatch samples can be had with a small outlay, will last indefinitely, and need not take up any more room than the table on which the apparatus is fitted. Of course, a small room with shelves, closets, stoves, and wash basins could be fitted up for more pretentious work in a mill that can afford it, but any mill that can afford to do the dyeing and finishing of their production cannot afford to be without a laboratory.

An inexpensive and practical laboratory can be fitted up with few pieces of apparatus. A stove or water bath, steam heated either directly with a perforated pipe on the bottom of the tank or indirectly through a coiled pipe, as in the illustration herewith. The tank for this water bath should be of brass or Monel metal, although even galvanized iron could be used, but would not last for very long. In the illustration, the water tank is in one unit, made of copper supported by an iron stand. The top is



A stove or water bath.

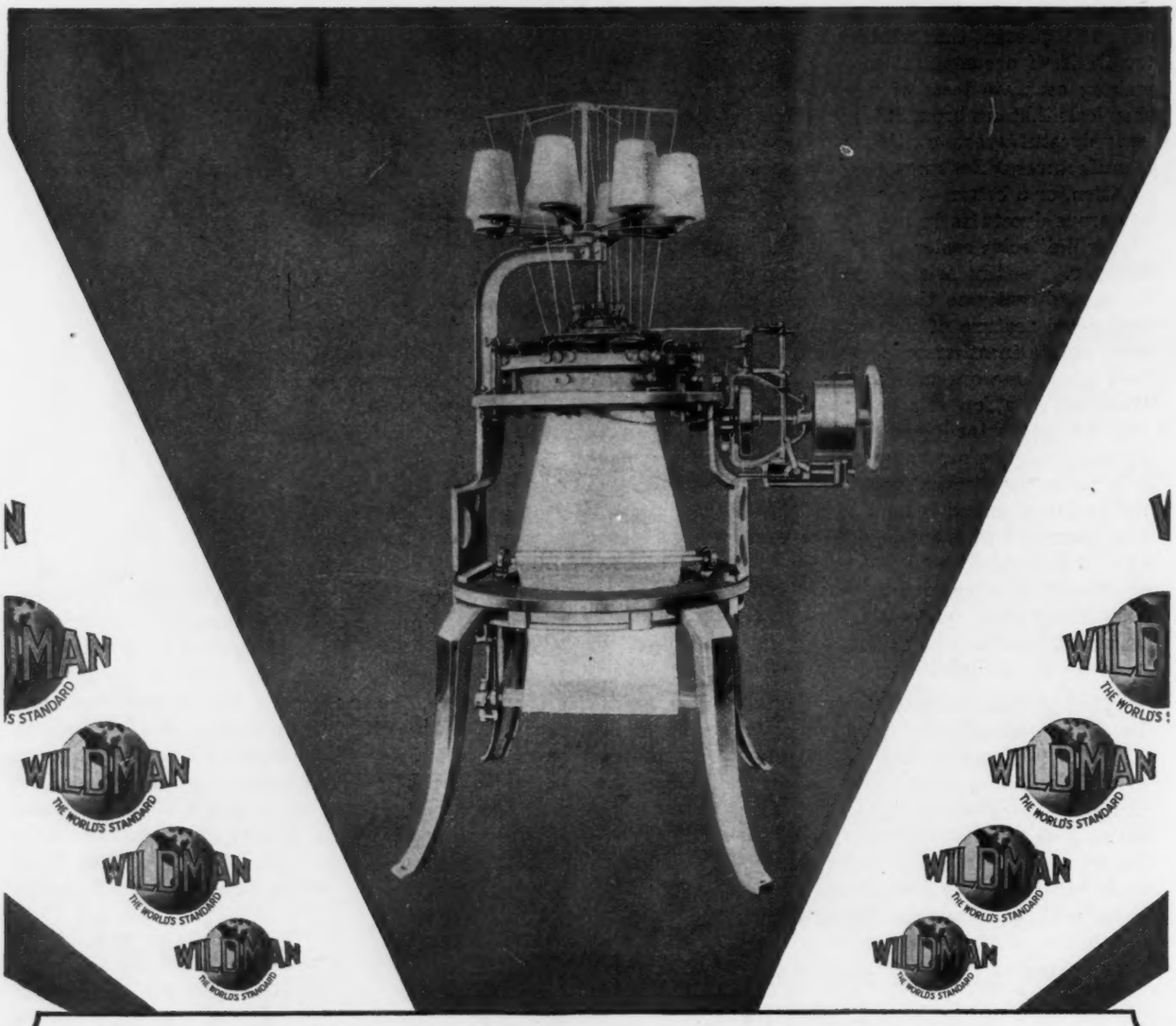
heavily enameled, fitted with holes of various dimensions to accommodate different size pots. The six smaller sizes are for pots the capacity of about one quart, and are used to test dyestuffs, or to dye a swatch, a small skein, or one stocking. In the medium size pots, can be dyed three or four stockings, or a larger swatch or skein, and in the larger pots as many as half a dozen stockings or a sizable piece of fabric can be dyed. The heating attachment is a closed coil running the whole length of the tank and back, heating the whole battery of pots at one time if necessary, or the pots can be removed, the holes covered and only the pot or pots needed left in the water bath.

If desired this water heater can be had in two separate units, one unit with four or six holes for the smaller pots, and the other for the larger pots and used as needed. The bath in the pots can be raised to a temperature of around 195 degrees F. which is sufficient for most testing of dyes and making sample shades on silk, cotton, and rayon. The temperature can be kept constant by keeping the water bath in the tank simmering. When a higher temperature should be required in the dyeing bath, it can be obtained by adding to the water bath some calcium chloride, glycerine, or common salt.

This method of heating is to be recommended for sampling dyestuffs and shades because the evaporation of the dyeing bath is kept down to a minimum, but heating can also be obtained directly by gas through a Bunsen burner, placing the pot over a tripod with or without a wire screen, or by electricity using a square steel plate heated by a charged coiled wire underneath, placing the pot on the plate, and when only one pot is to be used and a quick job is desired a small bore copper or monel metal coiled pipe can be fitted into the pot; the bath heated this way can be raised to the boil, kept boiling, and the testing done right in it. Pots can be had in glass, porcelain, enameled ware, copper, and Monel metal to suit any purpose and budget.

Other indispensable pieces of apparatus are: a

(Continued on page 130.)



The Wildman Body Machine produces a Rayon Fabric of finest gauge and perfect plating.

WILDMAN MANUFACTURING CO.
Norristown, Pa.

WILDMAN
THE WORLD'S STANDARD

WILDMAN
SPRING NEEDLE BODY MACHINE

How Do You Prevent Odds Accumulating in Finishing Department?

This man wants information on both dip-dyed and ingrain seamless work. What are your methods?

EDITOR COTTON:

We are manufacturing men's spiral half-hose, and are making a large variety of styles. This leaves us racing a problem of reducing the quantity of odds accumulating in our finishing department. We are now making dip-dyed Celanese and rayon half-hose, but at times we make ingrain, and so if possible I would appreciate information regarding reducing the odds in the finishing department on both types of work. I would be very glad to have some of your readers discuss in detail the methods they use.

CONTRIBUTOR NO. 6140.

More on Preventing Dirty Gores and Black Insteps on Seamless

Also further opinions as to length of lunch hour, using fugitive colors for cheapness, how long an operative can loop, or top and transfer, etc.

EDITOR COTTON:

On page 89 of the July issue, "CONTRIBUTOR NO. 6116" asked some interesting questions with regard to seamless work.

His first question was, "In these days of light shades in ladies' hose, bleached and ingrain numbers in infants', children's and other lines, what can be done to keep seamless machines from making dirty gores in the heel and toe, and black streaks across the instep?"

Seamless knitters always have been and always will be a source of trouble, in making graphite stains in the gore line of the heel and toe and the instep line of the hose. Because of light shades being the predominating colors today, it is natural that every preventive to clean out this graphite substance be taken. Due to half of the needles being thrown up out of action during the knitting of the heel and toe, whatever oil or graphite happens to be on these needles is transferred to the stitches on the instep side, causing this black line. Due to the up and down motion of the other half of the cylinder needles, the graphite appears along the gore line.

However, preventive measures can be taken to reduce this trouble to a minimum. It has been our experience over a period of years that machines that are not run regularly are more troublesome in this respect than those which operate constantly.

This graphite substance, which is a mixture of the oil used for lubricating the needles, mixing and rubbing in the cylinder slots, and gumming of the machine, results in this trouble.

Taking it for granted that the inquirer is keeping his seamless machines clean of excess oil, by the use of cleaning rags, and that his fixers take due care of these machines when overhauling them, cleaning out and washing the cylinder and needles separately in a gasoline solution, we will proceed to make some suggestions.

First, to prevent as much of this trouble as possible, a first grade stainless needle oil should be used. There are a number of needle oils on the market, many of which from my experience are not good for the lubrication of needles.

It is the practice in our mill to run a cheap cotton number on these machines, when this trouble is too prominent, until a greater part of this graphite is absorbed by this cotton yarn. During this process the needles are flushed into a light stainless oil, and the excess oil that drips from the cylinder is wiped off with cleaning rags.

We oil the needles, sinkers, and jacks only once a day, 15 minutes after starting up in the morning. Experience has shown us that this is sufficient lubrication and that it keeps these graphite stains away.

It is not good practice to clean out these machines with an air hose. If this is done, these needles and sinkers become flushed with this graphite, and it takes a long while before they are clean again.

There are on the market today several devices, designed to clean this graphite from the needles by raising and lowering the cylinder needles a little higher in the cylinder than in making the heel and toe. By so doing, whatever oil is on the needles is transferred to the fabric being knitted. Although these devices have merit, I have tried most of them, but have not had complete satisfaction with them.

Your inquirer next asked, "Under normal conditions, how many hours a day can an operator be expected to top and transfer, or loop, and get best results?"

Under normal conditions, an operator should be expected to loop and transfer and top 8¾ hours a day, or a 48-hour week. These hours are based on years of experiment in our plant, where we have always had a large number of transfer knitters, toppers and loop-

WANTED:

FINE GAUGE HOSIERY

PRICES, during the past few weeks, have simply dramatized a fact which has existed for many months—namely, there is no overproduction of quality hosiery.

In hosiery, "quality" consists of a number of things, an important one of which is gauge. Today buyers of both ladies' seamless and men's half-hose are demanding finer gauges. They are asserting their demand in terms of higher prices paid. Yet despite this demand for finer gauges, it is estimated that less than 30% of ladies' seamless machines and only 14% of men's machines are capable of knitting those gauges for which buyers are paying a premium.

Take half-hose machines, for example. Quality demands, among other things, a true wrap pattern.

Are you making these

KNITTING MISTAKES?

These 4 mistakes are the main ones, according to prominent hosiery buyers, which may put your hosiery in the 10c to 19c per pair class.

1. Half-hose with sleazy, underweight body fabric; undersized yarn in heel and toe; and in many instances, boarded-up sizes; in other words, hose which **cannot** and **do not** give wear to the consumer.
2. Rayon and cotton, or rayon and celanese half-hose made on 176 and 200 needle machines.
3. Patterns in float stitch construction with poorly made tops having no elasticity and a very objectionable lacy effect in the body.
4. Reverse plaited half-hose, 176 to 200 needles made on semi-obsolete machines which should be changed to finer gauge, with up-to-date attachments.

Yet of some 14,000 fancy machines in operation only 2,000 can knit true wrap construction. And as for gauge, only 12% of installed machines have 240 needles or better, WHILE ONLY 2% CAN KNIT 260-280 NEEDLE MERCHANDISE for which buyers are now showing a preference.

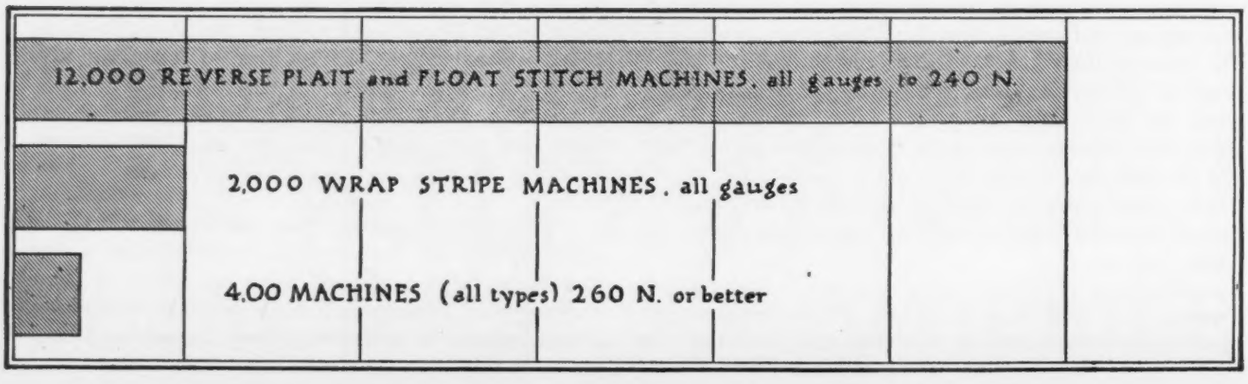
Manufacturers with the proper equipment are practically without competition for the cream-of-the-market business. A number of mills, aware of this fact, have already started changing over machine cylinders to knit the wanted finer gauges.

HEMPHILL COMPANY

PAWTUCKET, R. I.

THIS CHART WILL SHOW YOU THE COMPETITION YOUR MACHINES HAVE TO MEET

Cylinder change-overs can, in many cases, take your machines out of the highly competitive group.


12,000 REVERSE PLAIT and FLOAT STITCH MACHINES, all gauges to 240 N.
2,000 WRAP STRIPE MACHINES, all gauges
400 MACHINES (all types) 260 N. or better

ers. However, one requirement is necessary before we employ an operator for any of these operations. His eyesight or her eyesight must be in condition to stand the strain which these operations require.

As to his next question, about the length of the lunch hour, we have always been in favor of an hour for our lunch period, especially during the winter months. I can see no reason why the lunch hour should be of shorter duration, unless production demands it, or the employees themselves wish a shorter lunch period so that they can quit that much sooner at night.

The inquirer's last question was, "Is it good business to put hosiery on the market in dyed or ingrain numbers in which the colors will 'pass out' when the goods meet soap and water?"

This is a rather amusing question, I must admit. If one is in the business of making inferior quality merchandise, or bootlegging hosiery, I guess you would call it business, but I cannot conceive of how any company could follow out this practice when their reputation depends on quality.

CONTRIBUTOR NO. 6152.

Causes of Break-Outs at Corners on Full-Fashioned Work.

Also, opinions on chief characteristics of full-fashioned needles. Do you agree?

EDITOR COTTON:

I am going to answer the questions of "CONTRIBUTOR NO. 6091", as follows:

Question No. 1. What causes break-outs at transfer corners (full-fashioned), and how can this defect be overcome? Sometimes this break-out occurs in the mill, but more often it is found by the customer after the stocking is worn, the stocking appearing to be perfect in every way before wearing.

Answer: We find that weak transfer corners are usually due to strained or drawn threads. The topper in raveling the topper courses down to the corner can pull too hard against the corners and produce a drawn inelastic fabric at this point. The same thing might be produced by the footer in cutting the ravel courses on the footer. These ravel courses might not be properly placed and distributed between the points on the bar which would cause these threads to come in contact with the sinker or divided tips and draw the corners.

Another contributing cause for this defect is the strain put on the stitches in transferring from the topper stand to the transfer bar by the stitches coming in contact too forcibly against the hump points in the transfer bar. We remove these hump points from the transfer bar in the silk portion and use them only in the heel tab section, where we have the re-inforced heel selvage.

Question No. 2. The trend of French heels in full-fashioned hosiery has been toward the narrower and shorter construction. Certain styles of shoes such as pumps, cause considerable friction which results in break-outs along the joining of the high heel and leg instep fabric. How can this type of heel be designed so as to retain the style advantage of the narrower width and yet give the consumer maximum wear under all conditions?

Answer: The new style narrow French heel has reduced the wearing quality of the stocking, and there is nothing that can be done to counter-act it. It is generally known that a heel re-inforced or plated with cotton gives longer wear. The softer fiber acts as a cushion for the silk. It is also true that a soft twist silk splicing will wear much better than a high twist silk for the same reason. Sometimes on fine gauges where the desired heel weight is wanted to give better wear a boiled-off silk splicing is used to give a tighter knit fabric without overloading the needles.

Question No. 3. We have difficulty in securing full-fashioned needles which are consistently of the same specifications to suit the individual requirements. What characteristics of the full-fashioned hosiery needle shouuld be considered as the most important? What is the best way to test various lots of needles for these characteristics?

Answer: We think that uniformity is probably the most important characteristic followed closely by temper. The temper may be tested by bending the stem until it snaps and noting the manner in which it snaps. Test the temper of the head by lifting the beard a number of times to an angle of about 45 degrees and note what punishment it will stand up under. If the needle is the right size and the right temper, the knitter can put it into the correct shape for knitting. It is not so much a problem in getting the needle in shape to put in the machine as it is to get a needle that will stand up and maintain its alignment and give service.

CONTRIBUTOR NO. 6106.

Wants Comparative Figures on Cost of Needles, Sinkers, Supplies, Etc.

Will you give your figures—whether seamless or full-fashioned, in exchange for this information from other mills?

EDITOR COTTON:

I would be very glad to see in "KNITTING KINKS" figures from different mills on three different points. I would like for both full-fashioned and seamless mills to answer this question, as I feel that a comparison of this information will be of interest and value in a general way.

First, will the full-fashioned mills please answer these questions

1. What is the average cost of needles, sinkers and points, per dozen hose produced?
2. What is the average cost of machinery parts and repairs, per dozen hose produced?
3. What is the average cost of miscellaneous factory supplies, per dozen hose produced?

Second, will seamless mills answer these:

1. What is the average cost of needles, sinkers and jacks, per dozen hose produced?
2. What is the average cost of machinery parts and repairs, per dozen hose produced?
3. What is the average cost of miscellaneous factory supplies, per dozen hose produced?

I realize that there will be a variation in the figures from different mills, due to different conditions.

I would suggest that in answering, each mill give the style and construction of product, type and size of machine, and any other details which would help in making a comparison more nearly possible.

CONTRIBUTOR No. 6141.

A Discussion of the Parts of Scott and Williams Machines.

IN a series of short articles, of which the following one is the first, the writer will endeavor to present in a helpful manner a discussion of the machine parts on Scott & Williams machines, by taking up in order the various plates in the manufacturer's catalog with which all men using this make of machine are familiar. The first article takes up the parts which are illustrated on Plate I, discussing some of the more important of these and giving practical suggestions as to their care, adjustment, and operation. The other discussions in this series continue by covering the parts shown on subsequent plates; the next article (herewith) discusses the parts given in Plate II, the third article (herewith) Plate III, etc. It is suggested that in reading these discussions, the reader turn to the plate in question in the catalog and refer to it while reading the comments found in these articles. Furthermore, it will be a good idea to clip these discussions out and file them in the catalog along with the plates to which they refer.

The numbers in parentheses following the names of parts are the same numbers used by the manufacturers in referring to the parts in the catalog.

Plate I.

EDITOR COTTON:

I believe it will be helpful to those of your readers who operate the Scott & Williams type of hosiery machines to give a brief discussion of the various machine parts, as shown on the various plates in the manufacturer's catalog. The present article, for example, refers to Plate I in the catalog and subsequent articles will cover the other plates, such as Plate II, Plate III, etc.

Comments of your readers on these discussions will be appreciated, together with suggestions as to how they might be improved.

Taking up first Plate 1, the main frame (6,000) and main frame base (6003) are two of the many parts of a Scott and Williams machine which, barring accidents or abuse, will last indefinitely. When the shield (6180) is removed while oiling or making repairs and adjustments, it should be replaced carefully. Very often this is not done and it usually interferes with the free movement of the pattern chain or other mechanism, also falls to the floor and might injure someone or be broken. The leg bolts should be kept tight to avoid leg breakage while moving machines. I have seen machines fall to the floor and be seriously damaged due to loose leg bolts while being moved. The chain rack screws should be kept tight, to help keep an even tension on the pattern chain and prevent buckling which causes broken chain racks, bent chain pawl plates, machines running out of time and many other troubles commonly known to machine fixers.

The driving gear oil tube (6750) should not be allowed to become clogged. By observing it while the machine is running, it is a simple matter to locate a loose driving gear shaft gland (6021—Plate V) as the tube will move back and forth if the gland screws (15158) become loose. The screws in the main shaft caps (6002) and (637) should be kept tight to avoid unnecessary wear and lost motion in the main shaft assembly, and the main shaft cap pins (126) should be in flush with the outside of the cap to keep the oil holes lined up properly and prevent main bushings (6009, 6014—Plate IV) from turning with the shaft.

The chain sprocket studs (182) should be oiled occasionally, especially on ladies' hose machines where they carry a load due to the long pattern chains. The starting indicator (7482) should be in its proper position; it is very useful, when teaching an apprentice or a new knitter to set a pattern chain properly.

In the next article in this series we will cover the parts shown in Plate II, in the catalog.

CONTRIBUTOR No. 6138.

Plate II.

EDITOR COTTON:

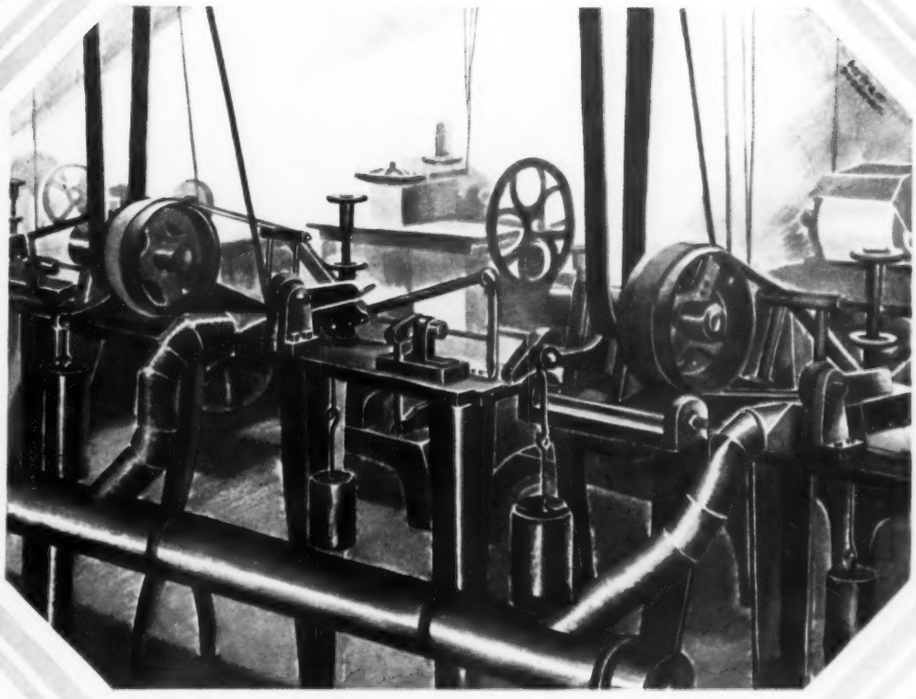
This is the second of a series of short articles discussing the care, adjustment and operation of the parts shown in the Scott & Williams hosiery catalog. The first article, which covered the parts shown on Plate I appears above and, as pointed out, the method used in this series will be to take up the various plates of parts shown in the catalog and discuss the parts shown on them as to best methods of operating and adjusting them.

Taking up now Plate II, and the parts shown on it, the construction of all parts given on this plate and their functions are simple and should, with a reasonable amount of attention, give very little trouble under ordinary conditions. There are, however, a few things worth mentioning which may be helpful.

The cylinder tube bracket screws (15408) should be kept tight to avoid variations in knitting, especially on ladies' hose, where the weight of the cylinder and raising tube (6433) is transferred from the stitch graduating device to the cylinder tube bracket, when making the ankle and foot. Occasionally the cylinder tube adjusting bracket (6253) and screws (10189) will work loose and cause variations in knitting. The same applies to the cylinder tube arm (5750) and screws (15367). These parts should be inspected at regular intervals; the time will be well spent.

A simple and profitable addition can be made for the bobbin stand (6188) by making tapered wooden blocks that will fit into the paper cones with a hole just large enough to make a driving fit for the pin (528) to pass through. These blocks will keep the cones of yarn in proper alignment with the yarn guide staples (2281) and will also prevent large cones from rubbing together and causing waste and seconds.

There should be three cylinder raising pins (6739) under each cylinder. Many times one will be lost or forgotten when a cylinder is removed or replaced and



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Send your bars to the Torrington branch at 1640 Fairmount Avenue, Philadelphia, for a complete re-needling service

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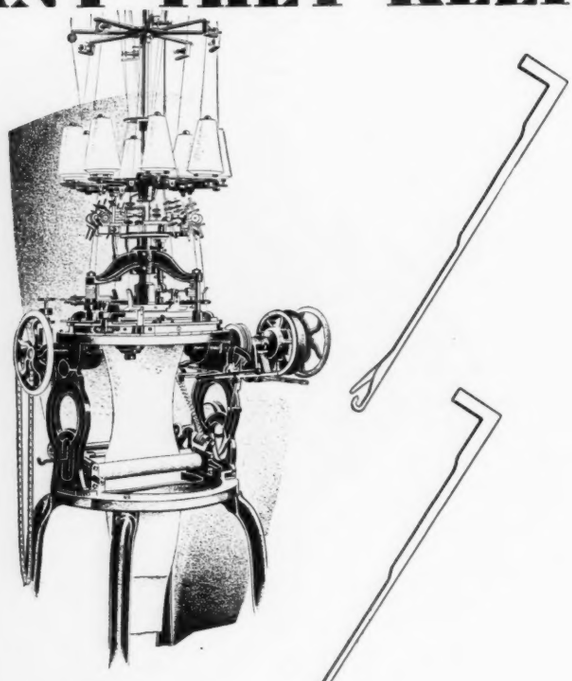

Scott & Williams' new "20 Cut" Automatic Swiss Rib machine.

To Torrington, needle headquarters, came Scott & Williams Inc. with plans for a new machine which would require a finer gauge needle than any being made. And our engineering department developed one for them . . . with characteristic painstaking accuracy.

The machine makers proceeded with their machine, and the introduction of such lovely undergarments as the one illustrated became another reason for knowing Torrington needles "by the company they keep".

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TORRINGTON *Latch* NEEDLES

a machine running with two pins is bound to give trouble in many ways. When a new pin is put in, it should be measured with a micrometer to make certain that it is of the exact length of the others in the machine; or a better method would be to put in a new set of three and hold the old pins for future replacement. Many troubles, such as the commonly called crooked stocking, transfer trouble on H H and Model K machines, also other trouble at times difficult to locate, can be traced to poorly matched cylinder raising pins.

Yarn guide staples (2281) and wire yarn tensions (6625) should be free from rough places to assure free yarn delivery.

The Scholler oiler should be kept supplied with stainless oil, and hardened wicks should be replaced. By punching a hole through the oiler wick and threading the heel and toe yarns through the hole instead of over the top of the wick, a lot of heel and toe trouble can be avoided. It is helpful in a number of ways to cut a piece of felt, sew it to form a tube and slip it over the stud yarn tension (6620) using the same oil on the felt tube as in the Scholler oiler, and setting the stud yarn tension plate (7317) so that the yarn will pass gently over the pad and absorb the oil.

This covers the parts on Plate II, and in our next article we will take up those shown on Plate III.

CONTRIBUTOR No. 6138.

Plate III.

EDITOR COTTON:

We will now proceed to discuss in the series of brief articles on the parts shown in the Scott & Williams hosiery machine catalog, those given on Plate III. All of the parts shown on this plate, and their adjustment, are no doubt gravy to the experienced machine fixer, but a peck of trouble to the boy who is starting at the bottom, unless he studies the various parts carefully. The machine builders have very good reasons for making each part on this plate just as it is, and if adjustments are made as they were intended to be made, there should be no difficulty in getting results.

The height of take-up brackets (5749) must be determined by the distance the thrust bar (8289) travels up and down, which in turn is controlled by the drum cams over which the thrust bar passes.

Be sure the take-up wires (8299-8300) pull all the slack yarn when reciprocating during this motion, they must be fully released, also see that the take-up wires are down on the take-up bracket while out of action.

The amount of pressure on the disc tension spring (6805) and the amount of pull on the yarn take-up lever spring (1835) must be determined to a great extent by the kinds of yarn used, the speed of the machine, and how tight or loose the fabric is being knit. All places through and over which the yarn passes should be smooth to avoid drag on the yarn.

Our next discussion will cover the parts shown on Plate IV in the catalog. Readers interested in further details on any subject from this contributor are invited to submit their questions to the editor.

CONTRIBUTOR No. 6138.

"Zebra Stripes" With Boiled-Off Re-inforcement.

What causes this effect in full-fashioned when using boiled-off yarn for re-inforcing?

EDITOR COTTON:

We have been making a full-fashioned stocking with a boiled-off silk reinforcement in the heel, sole and toe. The boiled-off silk is run in without plaiting. We use a six-thread boiled-off yarn for reinforcing a 45-gauge 3-thread stocking.

When the stocking is dyed and boarded, we have trouble with shade variations that give a zebra stripe effect throughout the heel, sole and toe. This stripe effect reminds one of misplating in a silk stocking plaited with cotton on the inside.

We shall greatly appreciate it if some of the readers of "KNITTING KINKS" will give us information on this condition, with special respect to the cause and remedy without resorting to plaiting or knitting the stocking with a split sole.

CONTRIBUTOR No. 6146.

Plans for Operating Full-Fashioned Mills on Curtailed Schedules.

EDITOR COTTON:

"CONTRIBUTOR No. 6090" has brought up a very interesting subject in asking for a discussion as to the best method of operating a full-fashioned plant on short time. In considering a discussion of this sort we must cover both the economical and the social viewpoints.

From the economical viewpoint, which I believe "CONTRIBUTOR No. 6090" has taken, I believe it better to operate a plant that is equipped for day and night production on day time only when market conditions will not allow full time production. The change in temperature, due to machine standing at night, will not be at all serious if the room temperature is maintained. The same thing applies to silk drying out overnight, assuming that the silk has been properly conditioned and then placed in the proper containers in the back of the machine. The outer layer of the silk on the cone will naturally dry out some. However, if the original condition of the silk is right, this can be very easily taken care of by felt wicks or rollers that most machines are equipped with. When it comes to the footers, I would run all footers part time, but I would not set up a schedule of every other day since this would mean a lot of additional handling of silk. I would either run half the footers half of the week, then clear the machines and then run the other half the balance of the week, or run them on short hours, limiting their production to a definite number of dozen, in order to insure an even distribution of work available.

Getting back to the legger end of the job, our experience has been that we get much better work from machines that operate days only than we do from machines that are operating day and night. In the

first place, a man that is running days only takes a greater interest in his machine. He feels that any additional work that he puts in on a machine would benefit him directly since no other operator could undo what he has done. Where machines are operated day and night, each man tries to put the blame on the other for any difficulties that come up, due to operators' negligence. "CONTRIBUTOR No. 6090" alludes to this in his letter when he speaks of sense or lack of sense of responsibility when the machine belongs to the other fellow.

Regarding the rate to be paid for night work, as compared with day work, from an economical standpoint, no higher rate should be paid as it costs more to produce work at night that it does at daytime, because of additional light required and also the possibility of imperfect merchandise being missed by the operator, in this way getting into good merchandise and going on through to the examining department. From the social viewpoint, a man running night is entitled to extra compensation since night work is not as desirable as day work.

It is the writer's opinion that the full-fashioned industry will in time find that night operation is not nearly as profitable as a great many people think, judging from the number of plants operating at night. We know that over-production is a big factor in the present conditions of the full-fashioned hosiery business and this was brought about, at least to a small extent, by day and night operation. There are, of course, certain jobs that have to be worked at for 24 hours a day, due to the nature of the product manufactured or the service rendered. I firmly believe this is not true of any textiles, however, and I also firmly believe that the entire industry would be much better off if the whole system should be abolished.

CONTRIBUTOR No. 6101.

EDITOR COTTON:

I notice the question of "CONTRIBUTOR No. 6093", who asks for a discussion of the advantages and disadvantages in using boiled-off silk instead of gum silk for women's silk full-fashioned hosiery.

Boiled-off yarn is more adapted to the manufacture of sheer hosiery, such as two and three-thread, made on fine gauge machines—particularly 51 and 57 gauge. This type of yarn, with the sericin removed, is softer and finer, thus permitting a more uniform loop formation than is possible with gum silk. In general a finished hose of this type, if well made, is quite readily distinguishable from a dip dyed stocking of similar construction due to the finer appearance.

The disadvantages are increased cost to manufacturers due to (a) More operations to prepare yarn for knitting machines; (b) higher knitting cost; and (c) higher percentage of irregulars due to increased danger of drawn threads and yarn defects such as fine places and lumps.

The latter can be excessive if the silk after boiling-off is inclined to be very lousy. This broken fiber or lint collects on the skein and cone winding guides and in turn attaches itself to the running thread in the form of a lump. During knitting press-offs and fine places in the fabric can be traced to this cause.

In the manufacture of gum silk the tendency for the silk to be lousy does not affect the knitting or the fabric. Even after dyeing this defect does not show up to any extent, due to the silk being in fabric form during the de-gumming and dyeing operations.

CONTRIBUTOR No. 6122.

The Laboratory in a Dyehouse.

(Continued from page 121.)

few glass rods ⅜ and ¼ inch in diameter, 10 to 12 inches long, to work the material in the bath; a couple of small dippers in enameled ware or porcelain to stir in and dissolve dyestuffs and chemicals; graduates to measure one to five c.c., one to twenty c.c., and one to 100 c.c.; a couple of pipettes to draw solutions and measure in the pots in c.c. These come in several sizes, with capacities of 5 c.c. to 25 or more. One of 5 c.c. and one of 25 c.c. should be sufficient for any purpose in a small laboratory. A number of glass quart bottles to keep dyestuffs ready in solution; a few test tubes and beakers, and a couple of high glass cylinders to be used for testing the solubility of oils, the disintegration of baths and for testing dyestuffs for mixtures, should be included. This last is a simple test to determine if a dyestuff is a type or a mixture of several dyes, and is done by dropping a small quantity of the dye to be tested in a cylinder full of cold water, and watching it dissolve and drop through the water. If the dye is a type and not mixed with anything else every small particle, as it dissolves, will go to the bottom, leaving streaks of the same colors all the way down. If any dyestuff is mixed with it, some of the streaks will show a different color which can be easily detected on its way to the bottom.

A set of Twaddle hydrometers to test the specific gravity of baths; a thermometer to register up to 220 degrees F.; a few Florence or Erlenmeyer flasks of 500 c.c. capacity; a glass funnel and a scale or torsion balance, constitute the pieces of apparatus mostly needed for a dyehouse laboratory.

For a more enterprising concern may be added: an apparatus for the determination of hydrogen ion concentration (pH control); testing for alkalinity or acidity with litmus paper or some other sensitized papers can never be as accurate as with this modern scientific method. Also a launderimeter and a Fadeometer to determine the degree of fastness of dyeings, a Colorimeter, a sample dyeing machine, a microscope, and many other things that scientifically minded men have devised to promote efficiency in textile mills, could certainly be used to advantage in a progressive up-to-date laboratory, and the cost should not prove beyond the means of any well appointed dyehouse when the final reckoning, and the benefits derived in better work, consistent results, and freedom from guess work, are taken into consideration.

The KNIT GOODS MARKETS

THE sensitiveness of the hosiery primary markets can be detected in an analysis of the reports of 341 identical mills for July 1932 and July 1931, as commented by trade factors who point to the apparent significance of the fact that the rise in wholesale prices started about the time it was sensed by manufacturers that orders and shipments in July, in their combined relation to production would show statistical changes in favor of mills. Production, all classes, was almost 25 per cent below that of the corresponding month of 1931. There were corresponding declines in orders booked and net shipments, so that at the end-of-the-month stocks were almost three per cent less.

Although the figures for July were not given to the public until after the middle of September, the better statistical position was disclosed to manufacturers in the preparation of their reports to the Department of Commerce in the beginning of August. Making comparison with June, there was found noteworthy improvement over that month. It was in early August that announcements of advances of prices for full-fashioned hosiery began to make their appearance from large mills. All the while that advances were being announced, however, production was being increased, during the dullest retailing period of summer, and it again appears significant that as the extent of increasing production came to be realized, along in September, there were indications of a weakening in the markets. Observers make the point that the situation, so far as relates to women's silk full-fashioned hosiery specifically, is so delicate that the markets make almost instant response to evidence of changing conditions.

Making comparison with July of 1931, stocks of women's silk full-fashioned at the end of the month this year were slightly greater, while as to women's seamless silk, there was a substantial decline. In the reports of the 341 identical mills to the Department of Commerce it is disclosed that production of women's silk seamless hosiery in July declined to 22,494 dozens from 36,787 in the 1931 month. There was shown a sharp drop in output of rayon full-fashioned and seamless, amounting to around 63 per cent for rayon seamless and 76 per cent for full-fashioned.

Fluctuations in the primary markets for hosiery made it appear at times in September that the full-fashioned industry was at a critical stage. Weakness developed while mills still were well supplied with orders and, taken as a whole, operating at a more nearly 100 per cent capacity than in months. Some ridiculously low prices came out in the special sales of a few department stores, after many manufacturers had announced and were maintaining advances of 25 to 50 cents a dozen.

Market Emerges from Critical Period; Brisk Fall Trade Foreseen by Mill Head

Conditions were out of plumb. Where, previously, manufacturers were accepting orders for only September-October, they then were, in instances, offering goods for November. Buyers permitted themselves to become possessed of the idea that the next move would be a break in prices.

To beyond the middle of the month, no recessions made their appearance. On the contrary, manufacturers were taking a firmer attitude. Changes came about as if over-night. At the start of the week of September 5, for example, there was evident a nervousness that, it was felt, might cause loss of all the ground that had been gained in previous weeks. By the end of the week, numbers of manufacturers were found stiffer in their adherence to asking prices. Just what happened to effect either of the two sudden changes of front no one seemed able, or willing, to say. But it was common opinion that, given time to pull themselves together, the heads of leading mills had recovered from their scare of less than a week.

"We look for a very brisk fall period and buyers paying the new prices for silk full-fashioned hosiery of standard construction," said the executive of one of the larger manufacturing organizations in the North. "We are not giving ourselves any concern over cheapened low-end full-fashioned that is in competition with 50-cent seamless silk," he adedd.

The manufacturer referred to sees two distinctive groups of manufacturers of full-fashioned hosiery. One, he holds, is producing goods of high

Report on Hosiery Shipments.

SHIPMENTS of women's full-fashioned hosiery in June aggregated close to 2,250,000 dozen pairs, according to a recent survey of establishments representing over 90 per cent of the industry. These shipments compare with a monthly capacity of somewhat less than 3,500,000 dozens. It appears from a hurried analysis of the report of the survey that 58 per cent of the reported June shipments were of 42-gauge stockings, while 21.6 per cent were of 45-gauge. Philadelphia, with 32 per cent of the country's total productive capacity of the industry, is credited with 33.6 per cent of the June shipments.

An interesting section of the report deals with distribution methods, and shows that 62.6 per cent of the shipments from mills were directly to retailers, including chain stores, while 31 per cent was shipped to wholesalers and jobbers, leaving less than five per cent sold to mills and less than two per cent to consumers directly.

A study of merchandising methods by sections reveals that mills in the Pennsylvania area ship about 50 per cent of their production to retailers and 42 per cent to wholesalers and jobbers, while the Middle West sells 84 per cent to retailers. Approximately two thirds of the merchandising of the New York-New Jersey and southern areas is through retailers.

Of the shipments to wholesalers and jobbers 42-gauge represents 61.5 per cent of their total receipts, while 42-gauge taken by retailers is about 55 per cent of their total.

The survey was conducted by Dr. George W. Taylor of the Industrial Research Department of the University of Pennsylvania.

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standard for the dollar a pair class and higher. The other is supplying dealers with the kinds that are sold for about 69 cents, and lower, under the new price lists of mills which have made revisions conforming to the increase in cost of raw silk.

Scare Over Low Price Offerings.

Offerings of hosiery at seeming sacrificial prices by department stores having special sales caused conservative manufacturers of silk full-fashioned to warn against excessive production on the assumption that the stronger indicated demand at the time was a forerunner of a sellers' market. Prices were rising at a pace that left no doubt that manufacturers were aiming at profit, rather than volume at a loss. Yet, while it appeared the big retail stores were buying at adjusted values, some were featuring the lowest prices ever seen on a placard or in a newspaper advertisement exploiting women's silk full-fashioned stockings.

For the first time, the announcement of one leading store described in bold type sheer chiffon and sheer medium service numbers as first quality for 42 cents a pair, the chiffon carrying a lisle picot, French heels and cradle feet. The medium service, with lisle garter fold, also was of cradle foot construction. Neither was described by gauge. In 39-gauge, they would have shown a sub-normal retailer profit when sold for 42 cents, while in 42-gauge, at the recent wholesale low price, the margin would have been but 25 per cent, acceptance of which by a merchandise manager would portray him as a philanthropist in helping to relieve a mill of a burden and showing compassion for the consumer.

While a Gimbel Philadelphia store was distributing hosiery at a first-time low price, Strawbridge & Clothier were running a sale of a well known brand of silk full-fashioned at 60 cents a pair for either of two numbers, one a three-thread, the other a five-thread. All were described as 100 per cent silk, the five-thread number being made with the French heels and cradle feet and finished with a picot. At a somewhat recent sale these same numbers were priced 75 cents, a buyer stated.

The real affront to the hosiery trade was another department store's offering of first quality all silk lace and mesh hosiery at 37 cents a pair. The sales in the three stores ran concurrently in the second week in September, six weeks after manufacturers had started increasing prices by 25 to 50 cents a pair. The Berkshire 42-gauge at $4 a dozen which proved the summer's price sensation was advanced to $4.25 after the Golden Belt Co., in Durham, N. C., had put in effect its second 25 cents advance on its 42-gauge numbers, and in the meantime a number of mills added a quarter a dozen to the $4 promotion number.

In some quarters the low prices of the three stores were regarded as an intended retailer warning against further advances. Some interests believed the sales represented a clean-up of summer shades and discontinued numbers, as in the case of the 37-cent sale of former dollar and $1.50 lace and mesh. In any event, it was a trade opinion that the stores may have overlooked the proposal they were pursuing a contrary course for educating shoppers to the higher prices

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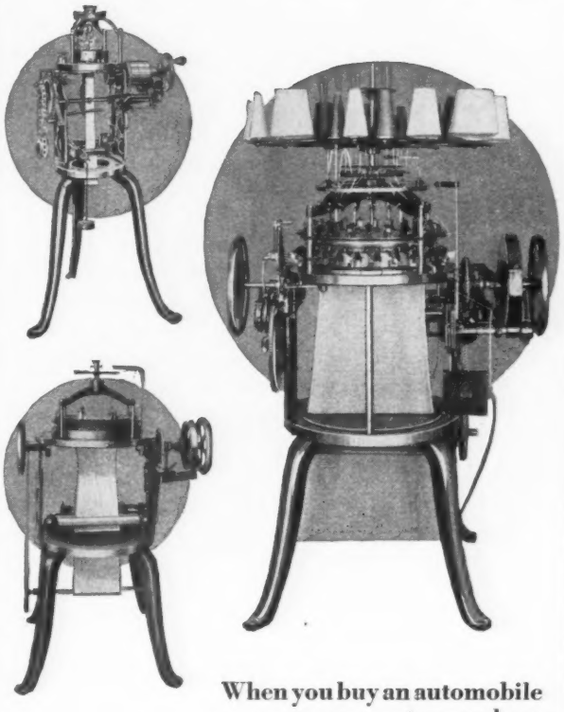

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C 10 Gray

which would appear inescapable. The answer of retailers to this comment was that numbers of mills were in operation day and night; that if there was enough excess production to justify the markdown sales it was the fault of manufacturers. Several of the Philadelphia manufacturers stated they were running only against detailed orders; that when these dwindle, working time is reduced to conform to shipments and unfilled orders.

Open market prices for raw silk, best grades, declined around 25 cents a pound in two weeks, and subsequently the New York market was fairly firm, which may be said to have put a better front on the market for hosiery. During the period of the decline there was, obviously, some doubt as to how far it might extend. That was the period also of steadily falling values of cotton, and included several successive days of unexpected breaks in the stock markets. Hosiery weakened in sympathy the markets for other commodities and a sinking spell among speculators in securities, and steadied in advance of recoveries in other markets, silk full-fashioned lines withstanding what was conceded a severe test of fundamental conditions.

Manufacturer Declares Price Advances of 50 Cents on $4 Goods Inadequate

It came to be a general admission among leading manufacturers that some of their lines which had been advanced by 25 to 50 cents a dozen were still underpriced, taking into consideration the higher cost of silk since early summer, even after making allowance for the September recessions. The management of one of the more successful medium-size plants figures that seven-thread 42-gauge sold by some manufacturers at their new price of $4.50 a dozen should be fetching $4.75. The 59-cent stockings of some few weeks ago, he maintains, should be priced 65 cents and the 69-cent medium service weight would be more in line with value at 75.

Pending buyer acceptance of the necessarily higher prices for silk stockings, a number of mills are to be operated only against firm orders, in the event of any general uncalled-for delay in supplying details. This seemed last month the intention of some of the manufacturers less susceptible to disaster from a declining market. It was adoption of this practice that is said in the trade to have pulled many of the mills through a summer of routine trading, when prices were being reported antagonized by a buying element that figures no profits for any but dealers; when quite a few were producing only in the gray for distributors supplying the mills with silk.

Among this element of manufacturers there was shown wide disparity in rates for supplying hosiery in the gray to parties financing payrolls and silk accounts. One concern bid $2.25 for manufacturing from buyer's silk, while the offer of another was $1.75. It was pointed out by the silk supplier that this about represented the difference between the high and low prices for medium service weight full-fashioned. Finished stockings from a manufacturer requiring no financial aid were quoted about that time at $4.25 a dozen, but when a fair size order was offered by a wholesaler, the price was advanced 25 cents, and the order was lost to this mill, in a Philadelphia suburb.

Indicated Ingrain Silk Reverse.

Buyers for some of the large stores whose clientele includes the more discriminating shoppers are ordering conservatively of ingrain silk, which some interests profess to believe will stage a come-back during fall and winter. This raises the question as to whether high twist silk will continue to hold supremacy—the answer to which may depend on woman's whims to the extent that style forecasts might be nullified.

At least one nationally known concern that in quite recent years had a wide reputation for its ingrains is pushing them, and one mill reports producing approximately 4,000 dozens a week, and "receiving a great many orders". Since good grades of ingrain from some of the more reputable mills can be put on the counter at a dollar to $1.35 a pair, it is reasoned, it should be not a difficult matter to put them across for volume selling.

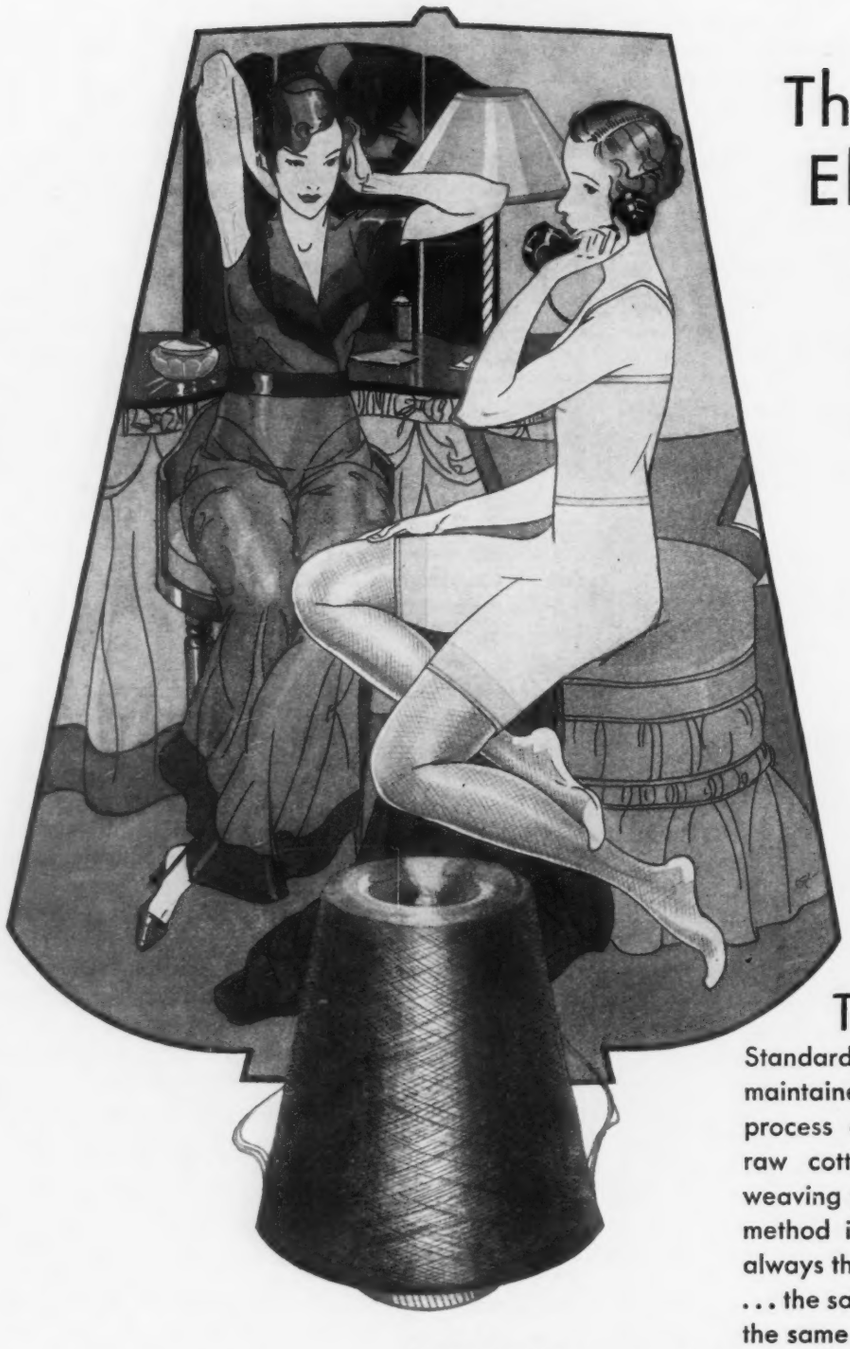
In the event of ingrain silk developing a fair measure of interest, will manufacturers of dip-dyed offer lustrous silks? So far as ascertained, none is departing from the high twist, dull luster. Clocked hosiery, picked some time ago for fall, is being stocked as virtually assured of being the vogue, for a time. Innovations at this time, it is held by buyers, are necessary for maintaining a broad shopper interest in hosiery. The retail trade wants something out of the commonplace—something of which to talk in the display advertising, and thus far that something is visioned as in clox and ingrains. In a week or two, non-run hosiery will take a conspicuous place in the picture of fall innovations, for it is to be on sale in retail stores from manufacturers operating under the Schwartz and Graenz patents respectively of competing organizations.

Non-Run Hosiery Now a Reality.

Well, non-run silk stockings manufactured under two distinctive patents are to be seen in service this month, according to announcements of the Textile Patents Corporation and the Gotham Silk Hosiery Co. in trade publications. So much has appeared in print concerning stockings that will not and, it is guaranteed, cannot be made to run that, it is stated, they are being asked for in some of the metropolitan retail stores.

Of the mills licensed to make them, some sell to jobbers exclusively, others to retailers only. Some of the mills are said to be sold up for two to three months. So far as licensees have been announced, all are in three or four northern states. Others "eligible as licensees" are to be added to the list as demand requires, according to official statement.

It appears the aim of one group to hold production down to approximate demand. It is quite certain there will be no flooding of the markets at the start or soon thereafter. The plans of the Textile Patents Corporation so far as announced call for a type of helpful service for retailers, besides protec-



The Quality Element in STANDARD-COOSA-THATCHER *Durene*

is Fixed

THE traditional quality of Standard-Coosa-Thatcher durene is maintained in every step of the process of converting high grade raw cotton into fine knitting and weaving yarns by the single control method in our own mills. There is always the same accuracy of count . . . the same evenness of thread . . . the same careful preparation of the finished package. . . . Plan your new numbers with Standard-Coosa-Thatcher durene. National leaders choose its uniform quality for their new as well as their regular numbers.

Samples on request . . . natural, bleached or colors.

STANDARD-COOSA-THATCHER CO.

CHATTANOOGA, TENN.

Executive and Sales Offices: Lafayette Building, Philadelphia, Pa.

Branch Offices: 456 Fourth Ave., New York, N. Y. — Johnston Bldg., Charlotte, N. C. — 940 Merchandise Mart, Chicago, Ill.

Canadian Representatives: Wm. B. Stewart & Sons, Ltd., Toronto . . . Montreal

The "READING"
Full-Fashioned Knitting Machine

TEXTILE MACHINE WORKS
Reading, Pennsylvania

tion for manufacturer, jobber, retailer and consumer.

The Schwartz patent hose will carry the trademark of the Textile Patents Corporation, which controls the patent and of which William Meyer, president of the National Association of Hosiery and Underwear Manufacturers and the Apex Hosiery Co., is the chief executive. The Apex and the Berkshire Knitting Mills were the originals in the development of the patent under the direction of William R. Smith, attorney, who is vice-president of the corporation. Others who are making the stocking under this patent are Julius Kayser & Co., Nickels & Lauber and the Schuylkill Valley Mills, Inc., at Spring City, Pa., of which Mr. Meyer also is president. Announcement by the Textile Patents Corporation of plans for protecting licensees hints at prosecutions for alleged infringement.

Half-Hose in Confusing Array.

The point has been made repeatedly that there are so many types of men's half-hose and the aggregate production is so much greater than the markets can absorb that it has become a most difficult matter for mills to maintain prices that are profitable. Yet there appears no material diminution in output, and a number of southern mills this year were buyers of considerable used machinery for half-hose, and children's stockings as well. Whether this equipment was bought for replacement or for expansion is a matter concerning which information is not available, but it may be assumed that further competition is the result.

It is indicated in the statements of mills reporting to the Department of Commerce that this year and in 1931 around 50 per cent of the total of half-hose production is of rayon and cotton in combination, and that silk and rayon is a declining combination, although not to as great an extent as is silk full-fashioned. Distribution of rayon-wool underwent a more pronounced decline this year than in 1931, say some leading jobbers, the declines being severe in all classes—men's, women's and childrens.

Record Showing for Athletic Hose.

Manufacturers state comparisons as to distribution of juvenile lines—misses', boys', children's—mean little as relates to the season as a whole. Practically all dealers were around two months late placing their initial orders, according to some concerns, and while it is stated there is expectation of the usual volume sales of juvenile lines as a whole—all types of fabric—to the middle of September were considerably under last year's volume to the corresponding date. Even in cotton, the cheaper lines, there remains a considerable vacuum to be filled before sales to the fall months will be up to those of a year ago.

A line in which there is indicated a far greater distribution than last fall is athletic hose, for which there were reported at the end of July unfilled orders for approximately 18,000 dozens. This was about two-thirds of the dozens for which orders were booked in July. By the 1st of August there were nearly 82,000 dozens of athletic hose in stock.

It's hard for a Hungry citizen

to be a Good CITIZEN

THE boy whose stomach is empty cannot be expected to do good work at school. Babies undernourished through another winter may be handicapped by frail bodies through life. The hungry father of a hungry family is hardly the man to seek employment with persistence, or to do well on the job when he gets it.

Before you can save a man's soul it is often necessary to feed his body. You have no right to expect the civic virtues of patience, courage and honesty from starving, freezing men and women. If they preserve a just attitude towards the laws of the city in which they live, it is a miracle.

This winter, as never before, it is the duty of all who are well-clad, well-housed, and well-fed to help the less fortunate. The fact that you gave last year, and the year before, does not lessen your responsibility. The fact that you cannot afford a large contribution must not deter you. The upturn of business with a gradual improvement of economic conditions does not remove the crisis of this moment. Emergency appropriations by the federal government amount to $300,000,000, but they meet only half the increased national needs for human relief.

The rest is up to you!

How will your dollars be used? First of all, they will feed the hungry, and relieve the absolute want of the unemployed.

They will be used, also, to take care of the sick and aged. They will help to maintain hospitals, orphanages and schools. They will make possible clinics and visiting nurses.

The dollars you give are invested in the forces of civilization right in your community!

WELFARE AND RELIEF MOBILIZATION, 1932

The Welfare and relief Mobilization for 1932 is a cooperative national program to reinforce local fund-raising for human welfare and relief needs. No national fund is being raised; each community is making provisions for its own people; each community will have full control of the money it obtains.

Give *through your established welfare and relief organizations, through your community chest, or through your local emergency relief committee.*

NEWTON D. BAKER
Chairman, National Citizens' Committee

This winter, as never before, support your local Community Campaign

QUITEX
SPUN RAYON

We have been spinning rayon for several years and have established a reputation that meets the most exacting buyer. Quitex Spun Rayon has a fashionable dull lustre and unusual strength—imparting to fabrics a new sales appeal.

There are many ways in which you may use Quitex to advantage in your textiles. Profitable results are assured with the Quissett reputation behind it.

Let us send you samples of Quitex Spun Rayon.

QUISSETT MEANS QUALITY

Quissett Mill
New Bedford, Mass.

Wm. M. Butler, Pres.
Edward H. Cook, Treas.
Thomas F. Glennon, Agent.

it was indicated in reports of mills which a year before had less than 2,000 dozens. This year's stocks in mills were reported as of August 1 more than three times greater than the production in July.

Hosiery Foreign Trade.

Exports of domestic silk seamless hosiery continues to decline in greater proportion than cotton and rayon, it appears from the report of the Department of Commerce for July, when only 944 dozens of women's seamless silk were sent to foreign markets. This compares with 1,090 dozens in June. Exports of women's full-fashioned silk in July totaled 13,643 dozens, a drop of only 683 dozens from June. Cotton hosiery exports amounted to 28,702 dozens of women's, 15,129 dozens of children's and 14,884 of men's, an aggregate of 58,715 dozens, comparing with a total of 59,711 dozens in June. An aggregate of 14,808 dozens of rayon stockings are accounted for in the report of July exports. The total for all classes of hosiery was 89,422 dozens, of an invoiced value of $195,943.

Imports for the month comprised 13,518 dozens of cotton, valued at $25,671, and 13,404 dozens of wool, of a value of $29,251. More than 12,000 dozens of the wool were of British origin. Germany supplies 7,572 dozens of the cotton, France 2,012 and Japan 2,758 dozens.

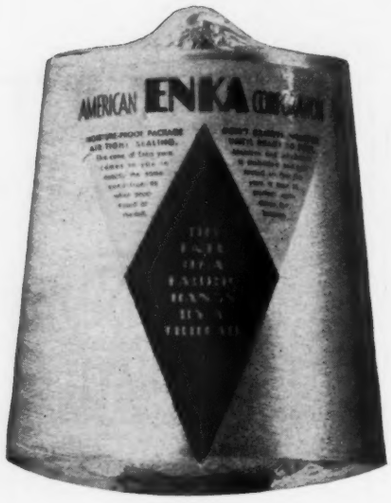
Manufacturers of men's cotton underwear were believed late last month to have established prices which, except for severe shakeup in cotton, will hold for the remainder of the year. It had been intended to make certain upward revisions in ribbed heavy weights effective September 15. Due to a week of declines in cotton following the issuance of the crop estimate by the Department of Agriculture, buyers were able to place orders at the previously prevailing rates, and jobbers expressed so much satisfaction with prices that some of the more prominent among them at once made a prediction that the season would prove a fairly brisk one, in that retailers quite recently presented a more friendly attitude toward taking in goods than ordinarily. Formerly it appeared there prevailed a sentiment among retailers that they would not pay the proposed advances, and jobbers were for the time at sea as to the expediency of placing the usual orders. All ended happily when the slip in cotton prevented the rise to which retailers had expressed violent objection.

Underwear Prices Believed Established for Remainder of Distribution Season

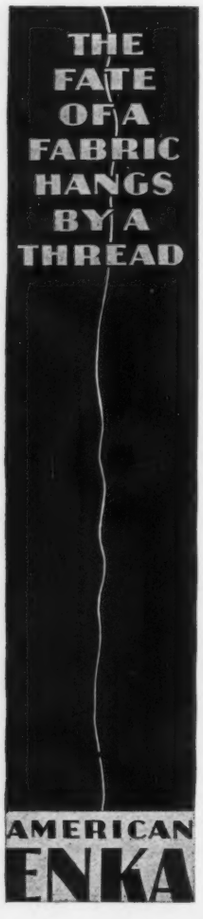
With a normal average temperature for the winter, jobbers say they probably will require as much heavy underwear as in recent years. Sales already are at the seasonal level in sections where union suits of from 12 to 15 pounds are in request as ordinarily, making allowance for the effect of depression on industrial life generally. In the cities, it is expected, there will continue increasing preference for summer weights for all year wear.

Mills, according to reported yarn purchases, are prepared for a steady run on heavies. Some were buying coarse counts of carded when yarns again became available on a basis of 15-16 cents for 10s

Perlglo ENKA



is the yarn that's talked about for FALL FASHIONS



THE new Perlglo creations for Fall explode any lingering doubt about rayon's ability to be supple and workable. Perlglo yarn is seen here, there, and everywhere — in washable daytime crepes, in satins for evening, and in knitted underwear . . . in each instance recognizable for its softer draping quality, its richer warmer lustre.

Outstanding in the new collections are a heavy luscious crepe in 30 glorious colors; Panné Crepe and a new crepe-back satin; a new drop-stitch knitted underwear fabric designed by America's most talked-of young designer. All of these fabrics are distinguished by that rich dull iridescence for which Perlglo is famous, and which is part of the yarn itself and will not wash or fade out.

★

AMERICAN ENKA CORPORATION
271 Church Street, New York City
Asheville, N. C. • Providence, R. I.

single. There had previously been extensive buying, just prior to the start of the sensational rise. Viewed from the angle of retailer and wholesaler, and a buoyant spirit among manufacturers, the primary market campaign started under satisfactory auspices. with a prospect of exceptionally low prices for the entire range proving a big factor in sales promotion. tion.

Women's Cottons Neglected in Advertising.

According to the statements of several buyers of underwear for large retail stores, women's cottons are being neglected by the merchandising and advertising departments. One well known buyer states, in reply to a question as to why women's cottons were not being accorded a share of the display advertising space, "the advertising manager of this store says there is not enough interest in them to warrant the featuring of price for special sales."

The buyer for another leading store, which during the summer ran several special sales of women's cotton bloomers, takes exception to the proposal of the other, as to lack of interest, and states that he persuaded the advertising manager to devote a large part of a day's space allotment to bloomers. In connection with a display three columns wide and a half page deep, he states, the store conducted a sale, presenting cotton bloomers in attractive fashion.

Approximately 1200 of the garments were sold on the first day of the sale and what remained went on sale in the regular way, until a second sale was staged, with a bare reference to it in a page advertisement. Less than 500 bloomers were sold and after the first day the sale was called off, pending another experiment. Within six weeks of the first sale, disposing of more than 1200 bloomers, the third was announced, in a spread as a part of the store's usual page of display. This sale exceeded the first, by more than 300 bloomers, the department manager states, adding that a liberal use of printer's ink did it. And as a result of the two especially featured sales, the store is officially reported selling more of women's cotton underwear.

Hold Branded Lines Firm.

Jobbers who balked at paying the original advances in prices for women's cotton underwear have since taken more kindly to the increases. Several after deciding to order initial lots of medium weights of a given mill line cancelled some time later when it was found there had been an upward revision of 25 cents a dozen. So long as the manufacturer had nothing more than a promise of an order he did not cover for yarn requirements. By the time a detailed order was received yarns had advanced and up went underwear prices accordingly. As several jobbers refused to pay the advance, the line was put in a half dozen or more retail stores.

Manufacturers of branded lines of underwear are reported by jobbers holding firm for their list prices on the more refined lines. Attempts to obtain concessions have failed in a number of instances, according to jobbers themselves. Lines sold in the better men's wear shops are mentioned specifically as the items in which price firmness is absolutely main-

for Cotton

To retain all the desirable qualities of your cotton fibres and release all the impurities, and thereby secure the best prices for your cotton yarn, knitwear or hosiery, use these Laurel Brand Products—

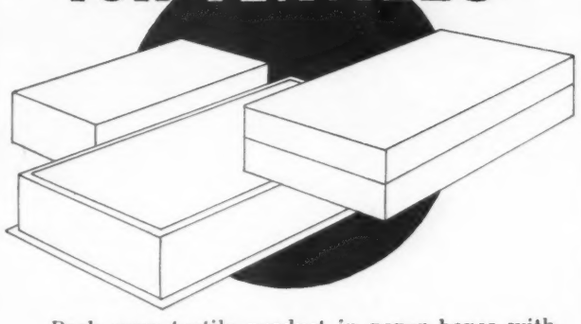
Laurel Textile Oil
Laurel Cotton Lubricants
Olive Savon Oils
Laurel Soluble Pine Oils
Laurel Cream Softener WN
Laurel SXG Oil
Hydrosol
Ruxite for softening

Solve all your Treating Problems with Laurel Brand

Laurel Soap Mfg. Co.
INCORPORATED
WM. H. BERTOLET & SONS
2600 E. Tioga St. Philadelphia

Textile Treatment Specialists since 1909

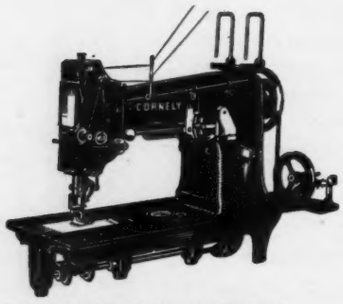
Better Packing
FOR TEXTILES



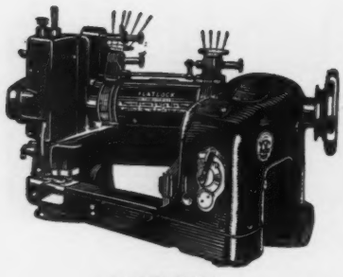
Pack your textile product in paper boxes with personality . . . styled to fit today's markets . . . printed to give your trade mark added effectiveness—in any desired combination of colors. Five strategically located Southern points to give you quick service and low freight rates. Write today to our nearest plant for samples and prices.

OLD DOMINION BOX COMPANY, INC.
Lynchburg, Va.
Winston-Salem, N. C. Burlington, N. C. Ashboro, N. C.
Charlotte, N. C.

quality OLD DOMINION Paper Boxes

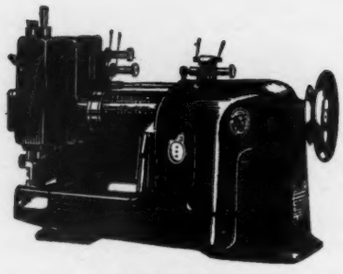


TWO-NEEDLE HEMSTITCH



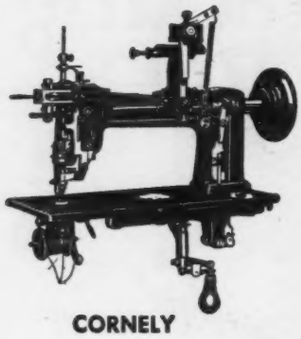
FLATLOCK

LOCKSTITCH



FELDLOCK

BETTER MACHINES FOR BIGGER PROFITS



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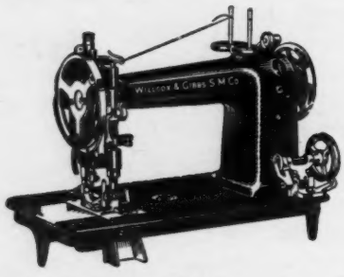
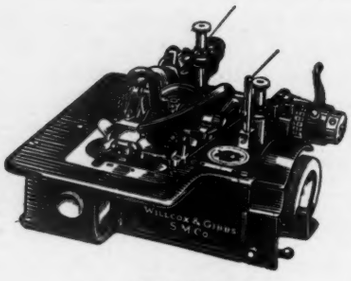


LOCKSTITCH TRIMMER & BINDER



OVERLOCK

WILLCOX & GIBBS
SEWING MACHINE COMPANY
658 Broadway • New York, N. Y., U. S. A.

New Willcox & Gibbs Machines and Parts can be purchased only from the company's offices

tained.

Not until advances in prices of worsted yarns amounted to 36 per cent and cotton yarns had moved up substantially did more than a comparatively few manufacturers of sweaters give serious consideration to the matter of increasing their prices to distributors. By that time, many of the manufacturers had put all of their low price yarns into goods on which they were receiving but a pittance of a profit, according to the narrative of some of the leaders in the industry, and by the time they marked their product higher, were consuming relatively high-price yarns. Thus they were little better off, in matter of profit, it is pointed out, than when buying worsted yarn for 55 cents a pound, early in August, as against 75 cents by the middle of September.

Sweater Mills Long Defer Pricing Goods on Parity with Yarn

It appeared the Lorenz Knitting Mills, Chicago, was one of the first to formally announce a mark-up of prices for sweaters to more nearly a parity with yarn cost. Several manufacturers in Philadelphia previously had advised their trade an advance would be made soon, and by mid-September a number, in scattered sections, were asking from one dollar to $2.50 more per dozen, depending on the type of sweater, shaker knit coats being the sharper advance. Women's are higher by a dollar and more, and boys' by around one dollar. Boys' sweaters have been among the better selling types; in fact, the return of school days proved helpful to most manufacturers of all types of children's knitted coats.

The season got a very late start, yet considerable yarn was taken in immediately prior to the start of increase in spinners' quotations. This accounted for the delay in putting quotations at a proper level, distributors being given a trade advantage which had been acquired by manufacturers in their purchases of supplies. Even at that, only a comparatively few jobbers were placing sweater orders on a seasonal basis. Hence the very keen competition as late as last month and some mills giving their yarn savings to jobbers.

Because of tardiness of distributors in detailing orders for early shipment, mills got into a jam over deliveries, and where a few weeks before there was competition for orders and plants were on part time, manufacturers were under pressure for goods and, in instances, operating over-time. It was a sudden transition from a dull, monotonous market to one of activity, responding to continued increases in manufacturers' prices. In some few instances two advances were announced within two weeks.

Price variance is noted more especially in ribbed sweaters, and was well illustrated several weeks ago in a standard type selling usually to jobbers for $12 a dozen. A few mills were accepting orders at $11, and where they offered their line to patrons of other mills, the latter met the reductions. The price cutters thus were taking a less profit than was being handed to mills generally, while establishing a low level for themselves.

Smooth Sailing if YOU USE "Brosco" SILK FINISHES

The 3 "Brosco" Silk Finishes ("Brosco" Dull Finish;—Finishing Compound S.P.;—"Brosco" Scroop Oil) when used in proper combination and proportion will give you any desired degree of *Low Lustre; Water and Spot-Proofing, or Softness* . . . and only "ONE" bath is required. So,—we repeat, it's "Smooth Sailing" if you stick to *"Brosco" Silk Finishes.*

Ask for Literature and Details

"Brosco Products"
SCHOLLER BROS. INC.
MFGRS. of TEXTILE SOAPS, SOFTENERS, SULPHONATED OILS & SPECIALTIES
AMBER and WESTMORELAND STS., PHILADELPHIA, PA.
and in ST. CATHARINES, ONTARIO, CANADA

Leaves raw stock clean . . . soft!

A little Oakite added to your raw stock boiling off formula is all that is needed to reduce harshness, assure complete rinsing, improve the penetration of the dye.

The safe, detergent action of Oakite helps produce, day after day, a cleaner, softer stock that takes more uniform colors, that is in better condition for carding and spinning.

Write for helpful data on your particular work. No obligation.

Manufactured only by

OAKITE PRODUCTS, INC., 26C Thames St., NEW YORK

OAKITE
TRADE MARK REG. U.S. PAT. OFF.
Industrial Cleaning Materials and Methods

The Yarn Market

Philadelphia, Pa., September 17, 1932.

A DECLINE of approximately two cents a pound in carded yarns from the 8th of September to the sixteenth was undoubtedly a more severe jolt for the yarn markets than any trader looked for. In fact, private crop estimates had led local yarn interests generally to look for an advance in cotton instead of a drop of about $5 a bale on the day the Department of Agriculture report was given to the public.

The jolt was a harder one than would have been the case if all had waited for the official figures—11,311,000. This being but 5,000 more bales than was estimated by government authority in August, the setback in cotton, followed by the recession in yarns, had to be accounted for in some other way than an indicated greater yield. As one consumer of yarns reasoned for himself, an increase of 5,000 bales, of an estimated value of $200,000 set the market value of the more than 11,000,000 bales back by around more than a half billion dollars.

If there was a panic in the yarn trade over the sudden facing of a shrinkage in the value of stock yarn, it was not apparent to even casual observers. Yarns declined as fast as they had risen after the previous estimate, and by September 16 a contract was said to have been placed for a weighty lot of knitting yarns, at undisclosed prices. It was the understanding in the trade that the basis of the successful bid would have to be a fraction below 15 cents for 10s. This compared with 16, commonly regarded a day before as acceptable in trades for ordinary lots. The contract in question embraced a line of both carded and combed peeler singles for underwear. The peeler was being quoted at the time at 22 cents basis of 18s, but lower figures appeared in the bidding for the business, according to traders who were among the bidders.

Considerable knitting yarn was contracted for during the rise, some business being placed at around 17½. Following the decline to September 16, dealers were taking note of these contracts and figuring what might be attempted for evading them. There are hanging over some contracts said to be yellowing with age, in which prices much above the recent rise appear. Dealers were feeling comparatively easy over these while prices were advancing and some compromises were being effected. Anticipating increases which would make the August-September price peak appear low, undetailed contracts may not receive much attention from sellers until later.

Two days before the break in cotton, announcement was made by the Aberfoyle Manufacturing Co. of an advance in mercerized yarns, representing an increase of five cents, basis of 60s 2-ply, to 60 cents, effective on the 7th, a day before the appearance of the crop estimate as of September 1. Subsequently two-ply combed peeler yarns were advanced and the same treatment was applied to singles.

Fair weights of mercerized were moved to manufacturers or contracted for at prices prevailing prior to the rise of September 7. Combed yarns pursued an erratic course in matter of volume of sales, tapering from short lived spurts and showing activity after rather protracted lulls. That the aggregate of sales had been heavy was indicated by a speeding up of spindles last month.

Carded yarns for the weaving trades have been showing some activity, but hardly matching knitting numbers in this respect, considered from a relative basis. Carpet mills are taking in very little of either cotton or worsted yarn. Manufacturers profess to see good business in carpets and rugs in the offing, with distributors shaping up their stocks for spring.

Philadelphia prices published September 16th follow:

Single Skeins.

4s to 8s	15½	10s	16
12s	16½	14s	17
16s	17½	20s	18
24s	19½	26s	20½
30s	21½		

Single Warps.

10s	16½	12s	17
14s	17½	16s	18
20s	18½	26s	21
30s	22		

2-Ply Skeins.

8s	16	10s	16½
12s	17	14s	17½
16s	18	20s	18½
24s	20	26s	21
30s	22	40s	27½ @28½

Two-Ply Warps.

10s	17	12s	17½
14s	18	16s	18½
20s	19	24s	20½
26s	21½	30s	22½
40s	28½ @29½		

Frame Spun Carded Cones.

8s	16 @16½	10s	16½ @17
12s	17 @17½	14s	17½ @18
16s	18 @18½	18s	18½ @19
20s	19 @19½	22s	19½ @20
24s	20 @20½	26s	21 @21½
30s	22 @22½	40s	28½ @29
30s double carded			25 @25½
30s tying-in			21 @21½

Carpet Yarns.

8s and 9s white warp twist	14¼ @15
8s tinged tubes	13½ @15
8s part waste	13

Two-Ply Combed Peeler Skeins and Warps.

8s to 16s	28	20s	29
24s	31	30s	34
40s	39	50s	42
60s	46	70s	56
80s	66		

Single Combed Yarns on Cones.

18s	23	@25	24s	26	@28
30s	29	@31	36s	32	@34
38s	34	@35	40s	35	@36
50s	39	@40	60s	44	@46
70s	54	@56	80s	64	@66

Mule Spun Carded Yarn on Cones.

10s	21	12s	21½
14s	22	16s	22½
18s	23	20s	24
24s	25	28s	26
30s	28	40s	35

Mule Spun Combed Peeler Yarn on Cones.

10s	26	12s	28
14s	29	16s	30
18s	30½	20s	31½
22s	32	26s	33
28s	32	30s	36
36s	38	38s	39
40s	42		

Tinged Insulating Yarns.

8s–1	14	8s–2	14 @14½
10s–1	14½	10s–2	14½ @15
		12s–2	15 @15½
12s–1	15	20s–2	16½ @17

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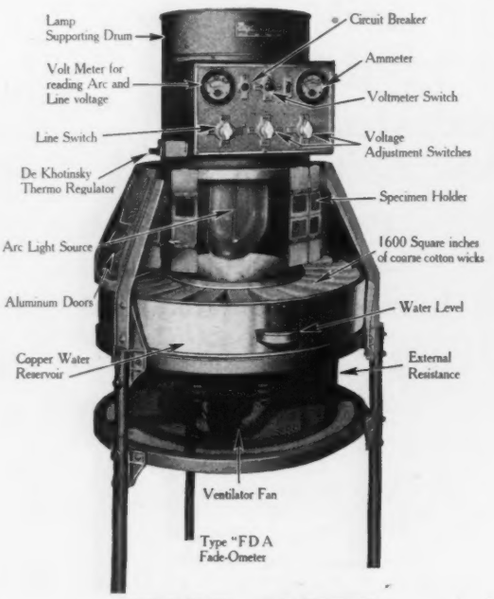

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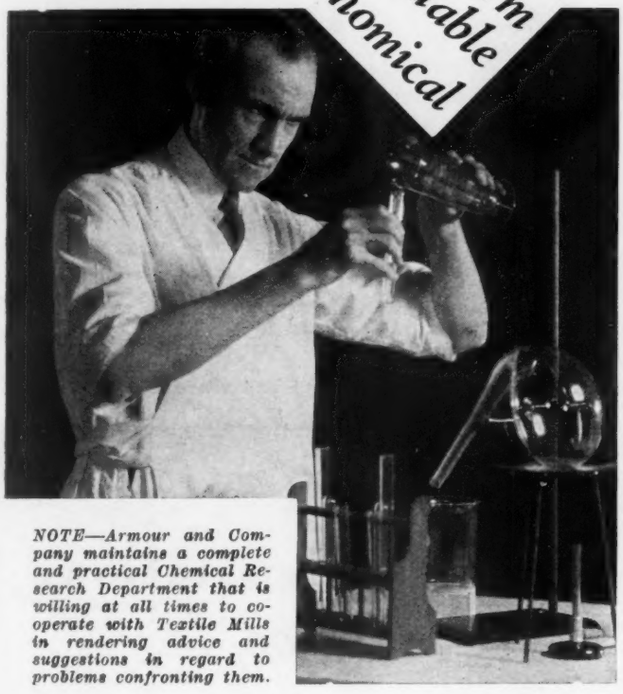

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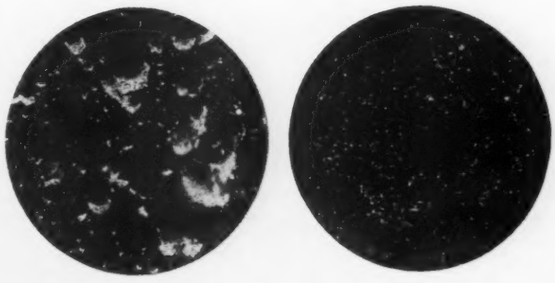

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EXPERIENCE has shown that most failures in textile dyeing are due to bad dispersion of the vat colors. The two micro-photographs above show the difference between an ordinary sample of pigment, and the same pigment after processing in the Premier Mill. Bad mixing in its initial manufacture, or long standing prior to use, will cause re-agglomeration. You know what sort of a result this is going to give in your textile dyeing.

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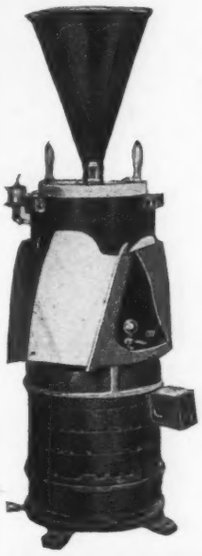

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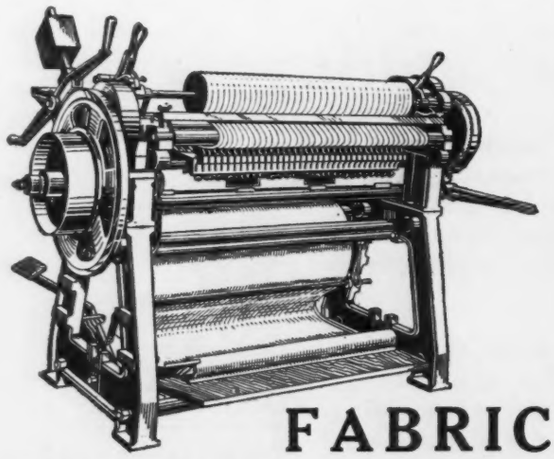

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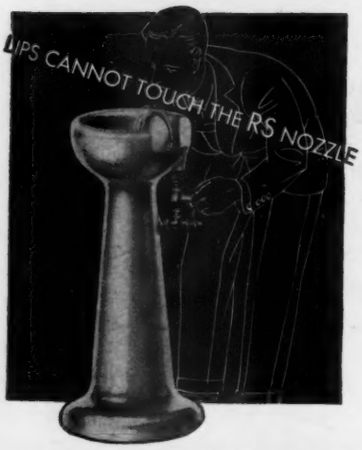

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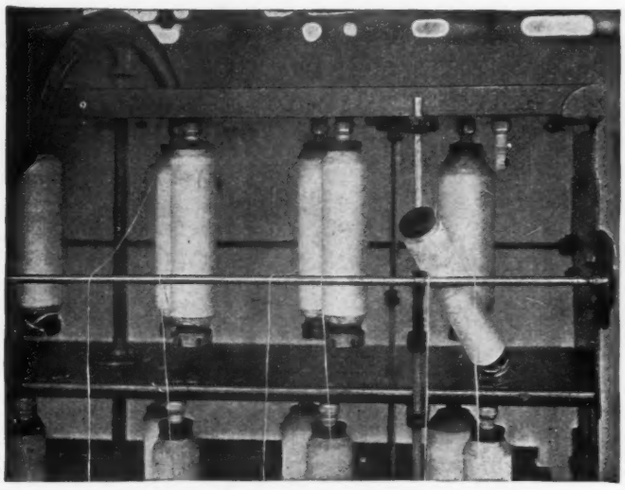

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"Smoother than Grease"

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McCord's clients are appreciative of the "pooled efforts of many minds"—each one of which contributes in some capacity, to the final satisfactory result of each undertaking. Write nearest office.

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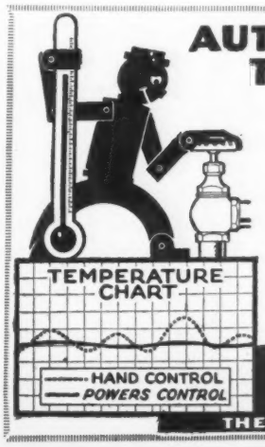

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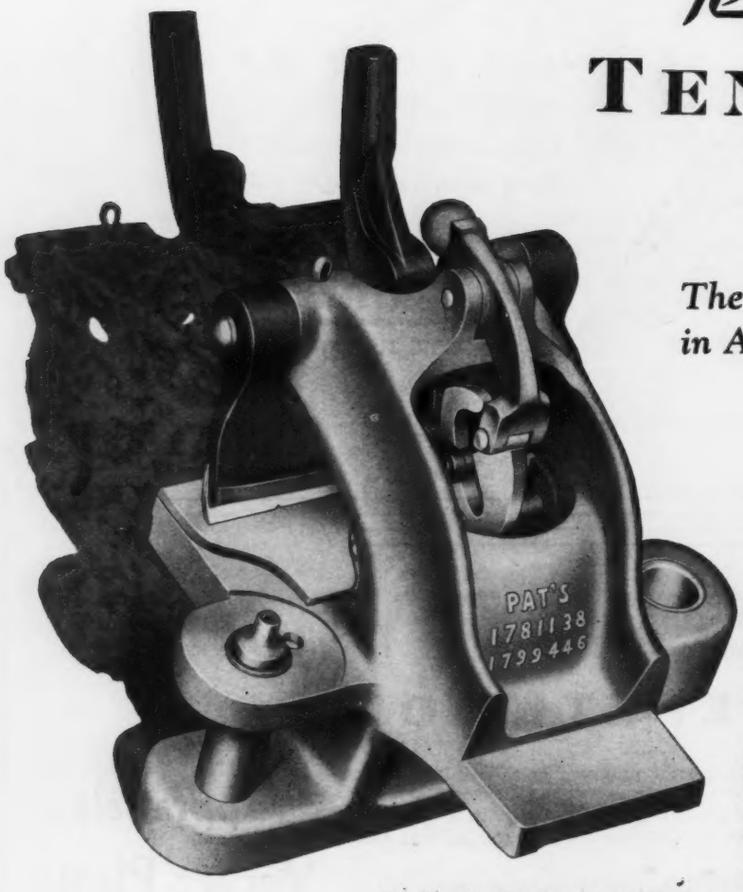
Textile's New TENTER CLIP



The greatest single advancement in Automatic Tenter Clip design

THIS latest Textile Tenter Clip has many exclusive and patented features not found in any other Tenter Clip manufactured to-day.

A Clip that in addition to being mechanically correct, can handle a broader variety of fabrics. A Clip that will give you more years of service, and cost you less for upkeep.

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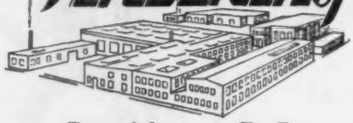
The connecting rivets are each equipped with an Alemite fitting for pressure type lubrication with grease.

Our nearest office will be glad to give you the complete story of this modern Tenter Clip.

The Textile-Finishing Machinery Co.



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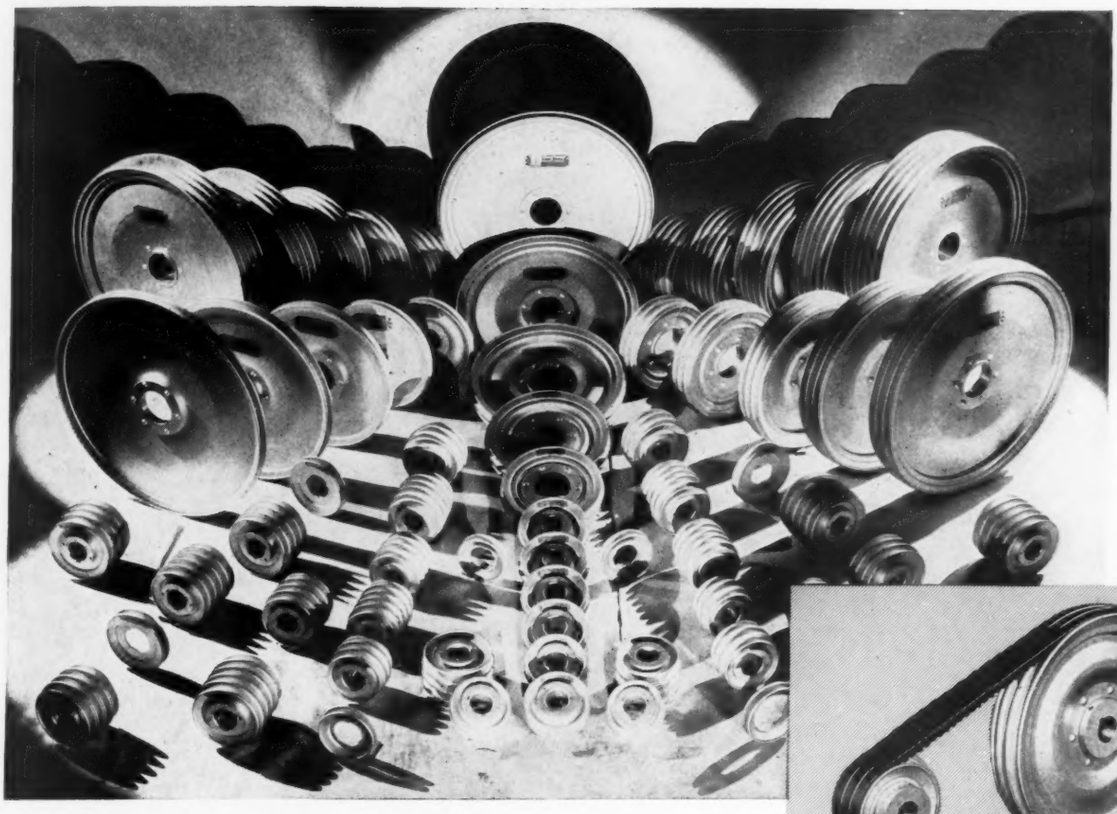
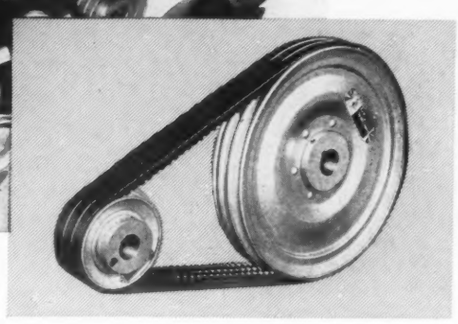
We invite you to visit our exhibit in Space No. 114 at the Southern Textile Exposition





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WITH DAYTON COG-BELTS

THIS NEW LOW PRICED V-BELT DRIVE IS NOW AVAILABLE IN A COMPLETE RANGE OF SIZES

New low levels in initial cost—lower maintenance costs—new high standards of performance—complete range of sizes. These are some of the many advantages offered by Day-Steel Pulleys, designed especially for use with the famous Dayton Cog-Belts. Here is a new and better pulley which is—

—*from 30% to 50% lower in price*—offering *tremendous savings* in initial cost and in maintenance expense.

—*accurately formed* from heavy-gauge pressed-steel, strongly welded both at the rim and at the web—assuring *maximum strength and ruggedness* with a substantial *reduction in weight.*

—*rigidly assembled* with a hub of unique design—providing *true running* and *accurate balance.*

—*finished* in high quality aluminum—providing *complete protection* and *outstanding appearance.*

NOW! 6 GROOVES

—*made with 1 to 6 grooves*

—for all ratings of 7½ h.p. and below—all speed ratios—all center distances.

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It will pay you to find out how this new and different pulley saves money—how easy to select the proper drive without engineering or calculations—how immediate shipments can be made from stock.

We'll welcome your inquiries. Ask for Bulletin No. 110-A, which gives complete information.

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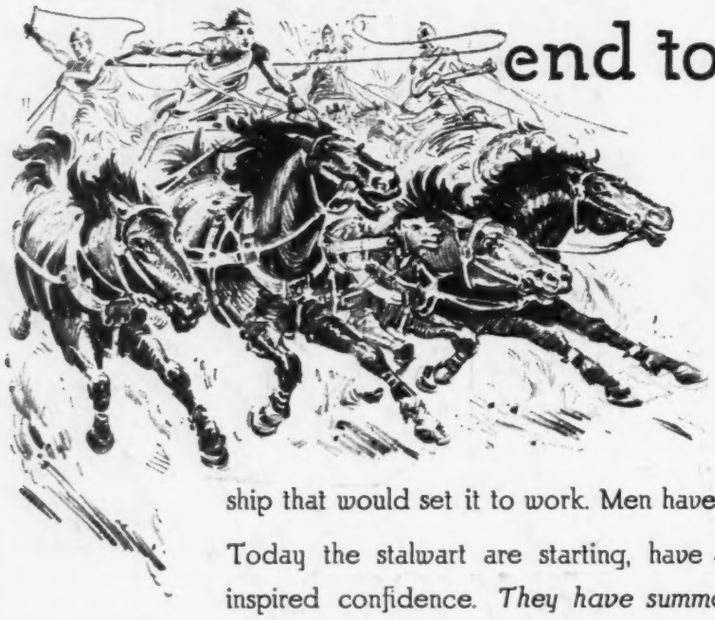
Dayton

COG-BELT DRIVES

"Their land also is full of silver and gold neither is there any end to their treasures * * * neither is there any end to their chariots."

—Isaiah II, 7.



IN the midst of plenty, men have been walking in fear . . . of what?

Somnolent wealth has idled for want of inspired leadership that would set it to work. Men have been waiting . . . for what?

Today the stalwart are starting, have started, boldly, with self-inspired confidence. *They have summoned the Engineer that he might point new ways to produce goods at a profit to fill impounded needs at a lower cost.*

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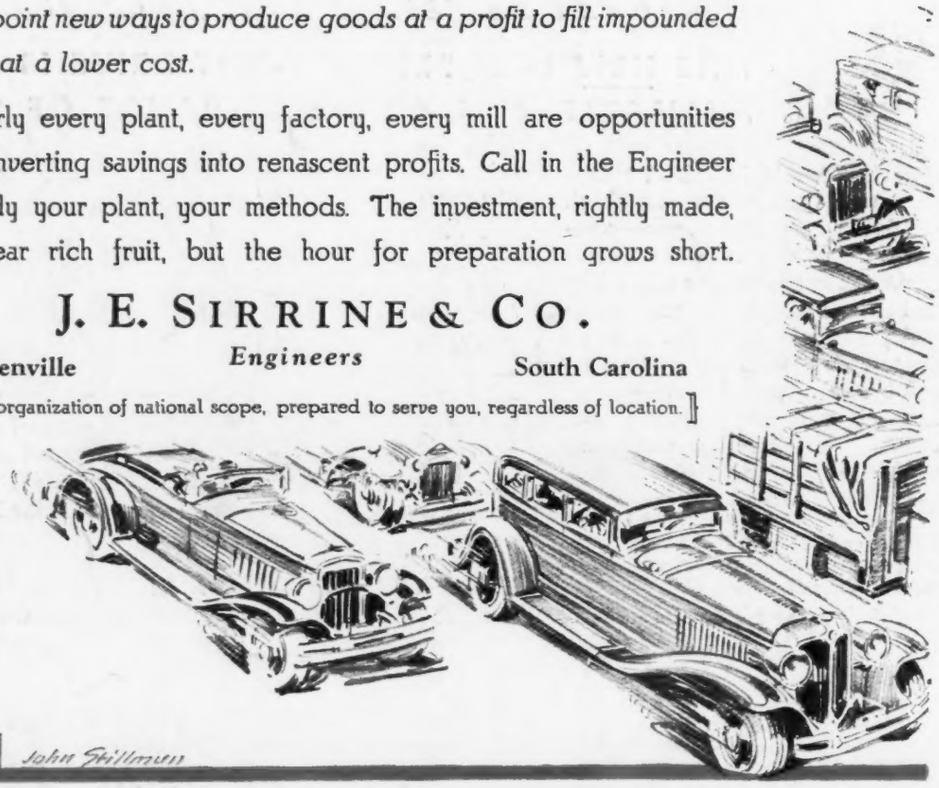

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NOVEMBER, 1932

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Quality Always

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Ask our representative to tell you about it or send you samples.

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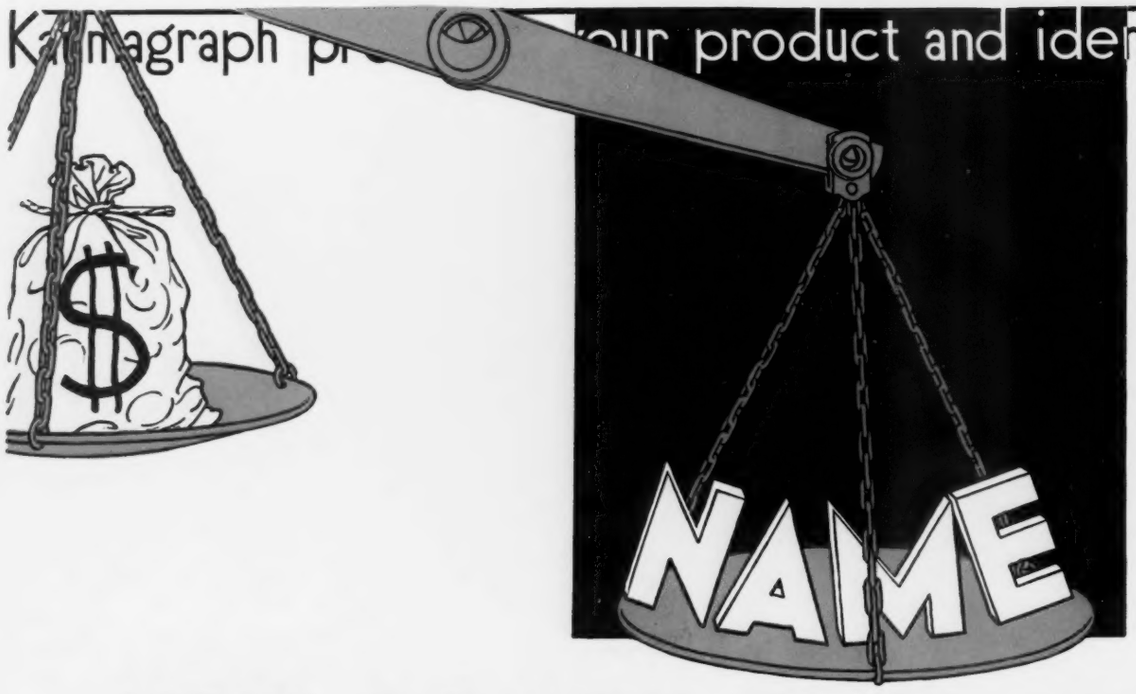

HOW DO YOU VALUE YOUR NAME?

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Great investments in buildings and equipment, and present sales outlets can become almost valueless if your product is without the identity that makes it known to thousands of retailers and also to the great mass of consumers. Cut-throat competition, cheapness, unsound value, all can undermine and outweigh your good name if you do not protect it.

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